

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF INDIANA

RYAN KLAASSEN, JAIME CARINI,)
D.J.B. by and through his)
next friend and father,)
Daniel G. Baumgartner, ASHLEE)
MORRIS, SETH CROWDER, MACEY)
POLICKA, MARGARET ROTH, and)
NATALIE SPERAZZA,)
))
Plaintiffs,)
))
-v-) CASE NO.
) 1:21-cv-238-DRL-SLC
THE TRUSTEES OF INDIANA)
UNIVERSITY,)
))
Defendant.)

The deposition upon oral examination of
COLE BEELER, M.D., a witness produced and sworn before
me, Patrice E. Morrison, RMR, CRR, Notary Public in
and for the County of Marion, State of Indiana, taken
on behalf of the Plaintiffs at the offices of
Stewart Richardson & Associates, One Indiana Square,
Suite 2425, Indianapolis, Indiana, on July 7, 2021, at
1:02 p.m., pursuant to the Federal Rules of Civil
Procedure.

STEWART RICHARDSON & ASSOCIATES
Registered Professional Reporters
(800)869-0873

APPEARANCES

FOR THE PLAINTIFFS:

James Bopp, Jr., Esq.
THE BOPP LAW FIRM
1 South 6th Street
Terre Haute, IN 47807
jboppjr@aol.com

FOR THE DEFENDANT:

Anne Ricchiuto, Esq.
FAEGRE DRINKER BIDDLE & REATH, LLP
300 North Meridian Street, Suite 2500
Indianapolis, IN 46204
anne.ricchiuto@faegredrinker.com

INDEX OF EXAMINATION		
		PAGE
EXAMINATION		
Questions By Mr. Bopp:	5	
Questions By Ms. Ricchiuto:	147	
Questions By Mr. Bopp:	162	
INDEX OF EXHIBITS		
NUM.	DESCRIPTION	PAGE
Exhibit 1	News at IU printout - Cole Beeler Bio	11
Exhibit 2	CareDash printout	12
Exhibit 3	U.S. News Health printout	13
Exhibit 4	Cole Beeler CV	17
Exhibit 5	Thrive by IU Health printout - Hand-washing tips from the experts	23
Exhibit 6	Thrive by IU printout - Is it Safe to Go Out? Helping Hoosiers Navigate Reopening	23
Exhibit 7	Abstract - Seroprevalence of severe acute respiratory coronavirus 2 (SARS-CoV-2) antibodies among healthcare workers with differing levels of coronavirus disease 2019 (COVID-19) patient exposure	38
Exhibit 8	Abstract - Clinical characteristics, outcomes and prognosticators in adult patients hospitalized with COVID-19	44

INDEX OF EXHIBITS (cont'd)		
NUM.	DESCRIPTION	PAGE
Exhibit 9	Declaration of Peter A. McCullough, M.D., MPH	142
Exhibit 10	Peter McCullough CV	142
Exhibit 11	Declaration of Cole Beeler, M.D.	10
Exhibit 12	Emails between Fauci and Angel March 2020	46
Exhibit 14	Printout - CDC data shows that COVID-19 survival rate for adults is 99.98%; chances of surviving coronavirus is over 99.9% for most age groups	52
Exhibit 17	Printout - Previous COVID-19 infection but not Long-COVID is associated with increased adverse events following BNT162b2/Pfizer vaccination	83
Exhibit 20	Printout - SARS-CoV-2 Transmission From People Without COVID-19 Symptoms	111
Exhibit 21	COVID-19 Treatment Guidelines (Last Updated: June 17, 2021)	109
Exhibit 22	Hill's Criteria for Causality	123
Exhibit 23	Analysis of COVID-19 vaccine death reports from the NAERS Database	123
Exhibit 31	CDC Article - Test for Past Infection	129
Exhibit 33	Report by Dr. Tess Lawrie	134
Exhibit 36	Printout of retweet by Dr. Beeler	103
Exhibit 37	Email between Fauci and Burwell February 2020	106

EXHIBIT

<p style="text-align: right;">Page 5</p> <p>1 THE REPORTER: My name is Patrice Morrison, an</p> <p>2 associate of Stewart Richardson & Associates,</p> <p>3 Indianapolis, Indiana. Today's date is July 7,</p> <p>4 2021. The time is 1:02 p.m. This deposition is</p> <p>5 being held at the offices of Stewart Richardson &</p> <p>6 Associates, One Indiana Square, Suite 2425,</p> <p>7 Indianapolis, Indiana. The deponent is Cole</p> <p>8 Beeler, M.D.</p> <p>9 Will counsel please identify themselves and</p> <p>10 any persons present with you for the record.</p> <p>11 MR. BOPP: James Bopp, Jr., for plaintiff.</p> <p>12 MS. RICCHIUTO: Anne Ricchiuto for Indiana</p> <p>13 University.</p> <p>14 COLE BEELER, M.D.,</p> <p>15 having been first duly sworn to tell the truth, the</p> <p>16 whole truth, and nothing but the truth, was examined</p> <p>17 and testified as follows:</p> <p>18 EXAMINATION</p> <p>19 BY MR. BOPP:</p> <p>20 Q Can you state your full name, please.</p> <p>21 A Cole Beeler.</p> <p>22 Q And with whom are you employed?</p> <p>23 A I'm dual employed by both the Indiana University</p> <p>24 Health as well as Indiana University School of</p> <p>25 Medicine.</p>	<p style="text-align: right;">Page 6</p> <p>1 Q And you've been designated as an expert witness in</p> <p>2 this case. What were you asked to do? What was</p> <p>3 your task that you were asked to assume?</p> <p>4 MS. RICCHIUTO: Object to the extent it calls</p> <p>5 for attorney-client privilege.</p> <p>6 Q Yes, and you don't need to answer --</p> <p>7 A Still answer?</p> <p>8 Q -- about any communications you had with your</p> <p>9 lawyer, so if you -- that is --</p> <p>10 A So can you -- I'm having trouble understanding the</p> <p>11 question. Can you rephrase or ask another way for</p> <p>12 me?</p> <p>13 Q Well, you've prepared an expert report; is that</p> <p>14 correct?</p> <p>15 A For this case. Is that --</p> <p>16 Q Yes.</p> <p>17 A Yes.</p> <p>18 Q All right. And why did you prepare that report?</p> <p>19 In other words, what was the task you were asked to</p> <p>20 assume?</p> <p>21 A I was asked to provide a rebuttal to the expert</p> <p>22 witness on the plaintiffs' side and to address the</p> <p>23 rationale behind the vaccine mandate at Indiana</p> <p>24 University.</p> <p>25 Q And when you say the, I think you said plaintiffs'</p>
<p style="text-align: right;">Page 7</p> <p>1 expert, that's Dr. Peter McCullough?</p> <p>2 A That's the document that I received.</p> <p>3 Q And what do you do for IU School of Medicine?</p> <p>4 A I have a number of responsibilities. I am chiefly</p> <p>5 employed in the division of infectious diseases. I</p> <p>6 spend about 30 percent of my time seeing inpatients</p> <p>7 and outpatients in clinic for a variety of</p> <p>8 infectious disease-related syndromes and diagnoses.</p> <p>9 About 50 percent of my time I serve as the</p> <p>10 director of infection prevention at Indiana</p> <p>11 University Hospital, which is the tertiary care</p> <p>12 referral center for many of the state facilities as</p> <p>13 well as our IU Health facilities across the state.</p> <p>14 I also am the key clinical educator for the</p> <p>15 internal medicine residency. I provide education</p> <p>16 for internal medicine residents as well as medical</p> <p>17 students as it relates to infectious</p> <p>18 disease-related topics.</p> <p>19 I'm also the associate fellowship director of</p> <p>20 the infectious disease fellowship for postgraduate</p> <p>21 internal medicine physicians.</p> <p>22 Q Do you have any responsibilities to Indiana</p> <p>23 University generally or is it just Indiana</p> <p>24 University School of Medicine?</p> <p>25 A For Indiana University, I also functioned as part</p>	<p style="text-align: right;">Page 8</p> <p>1 of the medical response team, and I was the</p> <p>2 director of symptomatic testing for that group that</p> <p>3 functioned as a branch of the Indiana University</p> <p>4 Restart Committee.</p> <p>5 Q And what was the Restart Committee? What was its</p> <p>6 charge?</p> <p>7 A When COVID was discovered to have been an issue</p> <p>8 related to potential constituents' illness and how</p> <p>9 we're going to have to approach the semester, the</p> <p>10 group was initially formed, without me actually</p> <p>11 being part of it, to develop guidelines around,</p> <p>12 after the initial shutdown, how the school could</p> <p>13 safely restart with minimizing the amount of</p> <p>14 infections moving into fall of, gosh, 2020 at this</p> <p>15 point.</p> <p>16 I joined the group as things were ramping up</p> <p>17 in order to help with the approach to symptomatic</p> <p>18 testing fairly short -- shortly after its</p> <p>19 formation, specifically related to the needs around</p> <p>20 the integration between the testing that at the</p> <p>21 time IU Health was providing and the school's</p> <p>22 constituency.</p> <p>23 Q When was that, that you joined the committee?</p> <p>24 A Oh.</p> <p>25 Q Approximately.</p>

<p style="text-align: right;">Page 9</p> <p>1 A Yeah. I'd have to look back for the exact number, 2 but I want to say it was probably around May of 3 2020. 4 Q Okay. And you were in charge of a subcommittee of 5 the committee which is involved with symptomatic 6 testing. 7 A That's right. 8 Q Go ahead. 9 A That's correct. 10 Q All right. And what is symptomatic testing? 11 A Symptomatic testing is the -- when we have 12 individuals who develop symptoms of upper 13 respiratory infection or really any symptoms that 14 are concerning to them at all, we needed to develop 15 infrastructure by which they were able to get COVID 16 testing, and then build that resulting 17 infrastructure so if they were positive or negative 18 into a contact tracing system. 19 Q And so then that was your area of responsibility 20 with the Restart Committee? 21 A Yes. 22 Q All right. Now, in looking -- well, let me show 23 you what's been marked as -- she will mark as 24 Beeler Exhibit 11. I'm afraid I'm going to jump 25 around a little bit, so Beeler Exhibit 11, please.</p>	<p style="text-align: right;">Page 10</p> <p>1 (Deposition Exhibit 11 marked.) 2 Q Is this the declaration you prepared as a 3 designated expert for IU in this case? 4 A Yes, sir. 5 Q Now, I note in the declaration that you don't claim 6 any particular area of expertise. Is that correct? 7 MS. RICCHIUTO: Objection. Misstates the 8 document. 9 A I have expertise in internal medicine, infectious 10 disease, public health, and hospital epidemiology. 11 Q But my question was about your declaration, that 12 you didn't claim any particular area of expertise 13 in your declaration. Is that correct? 14 MS. RICCHIUTO: Objection. Asked and answered 15 and misstates the document. 16 THE WITNESS: Do I still answer that? 17 MS. RICCHIUTO: Yes. 18 Q I'm sorry, I couldn't hear you. 19 A I have expertise in infectious disease, hospital 20 epidemiology, internal medicine, and public health. 21 Q And none of that is listed in the declaration, is 22 it? 23 A I would have to rereview. 24 MS. RICCHIUTO: Objection. Misstates the 25 document. Asked and answered twice.</p>
<p style="text-align: right;">Page 11</p> <p>1 MR. BOPP: You may answer. 2 A I'd have to rereview, to take a look at it. 3 Q We have the time, don't we? 4 A I mention my board certification in internal 5 medicine and infectious diseases, mention the 6 Restart Committee. I do not mention the infection 7 prevention. 8 Q Okay. Thank you. Now, I will represent to you on 9 IU's website where you're listed as a professor 10 that you have a bio. The problem is when you try 11 to copy it, it changes and you can't get what you 12 want. And it asks -- you list specialties, and it 13 says infectious diseases. Is that correct? 14 A That's correct. 15 Q Now, there are other sources of where you have 16 claimed expertise. Let me show you what's been 17 marked as Beeler Exhibit 1. 18 (Deposition Exhibit 1 marked.) 19 Q And of course I will represent to you that I 20 obtained this exhibit off the IU website. And if 21 you will look in the middle -- that is you; right? 22 A Yes. 23 Q Okay. And in the middle, it says "Areas of 24 expertise." It says "Infectious diseases, 25 infection prevention, influenza, flu, medical</p>	<p style="text-align: right;">Page 12</p> <p>1 student education." Correct? 2 A Correct. 3 Q Let me also show you what's been marked as Beeler 4 Exhibit 2. 5 (Deposition Exhibit 2 marked.) 6 Q Are you familiar with your listing on CareDash? 7 A No. 8 Q Well, if you turn to page 2, toward the bottom you 9 will see Overview -- and by the way, on page 1, is 10 that you? Is that your picture? 11 A Yes. 12 Q All right. On page 2, under Overview, it says "is 13 an infectious disease specialist." That's in the 14 first line. And then in the third line, it says 15 "As an infectious disease specialist, he may 16 specialize in Acquired Immune D Syndrome (AIDS) and 17 Chronic" -- and I have no idea how to pronounce 18 that. How do you pronounce that? 19 A Rhinitis. 20 Q -- "Rhinitis, in addition to other conditions." Is 21 that correct? 22 A Infectious disease physicians are trained in a 23 broad spectrum of infections, including those 24 listed. 25 Q All right. And then let me show you what's been</p>

<p style="text-align: right;">Page 13</p> <p>1 marked as Exhibit 3. 2 (Deposition Exhibit 3 marked.) 3 Q And this is the U.S. News Health website on 4 physicians. It says a Dr. Cole B. Beeler. Is your 5 middle initial B? 6 A Yes. 7 Q All right. And it says "Indiana University Health 8 Medical Center," the address, a list of experience. 9 You're a male, six to ten years of experience. Is 10 that all correct? 11 A Yes. 12 Q All right. It says an Overview. You're an 13 infectious disease specialist. Is that correct? 14 A Yes. 15 Q And then under Specialties, it says "Infectious 16 disease," and it says "Infectious disease 17 specialists deal with a broad array of diseases 18 caused by germs, ranging from flu to hospital 19 acquired infections to pneumonia." Is that 20 correct? 21 A Yes. 22 Q Now, you acknowledge that none of these listed you 23 having a specialty in COVID-19. Isn't that 24 correct? 25 MS. RICCHIUTO: Object to form.</p>	<p style="text-align: right;">Page 14</p> <p>1 A No. 2 Q Okay. Where on those exhibits does it say you're a 3 specialist or an expert on COVID-19? 4 A It says a broad -- 5 MS. RICCHIUTO: Object to form. 6 A It says a broad array of diseases caused by germs. 7 Q So you're an expert on every single one? 8 MS. RICCHIUTO: Object to form. Misstates the 9 testimony. 10 A We have to be experts in all infections that can 11 infect pathogens in order to care for patients in 12 hospitals and outpatient sites. 13 Q So you're claiming a special expertise in COVID-19 14 infections? 15 A I'm board-certified -- 16 MS. RICCHIUTO: Object to form. 17 A Sorry. I'm board-certified in infectious diseases 18 and have been trained in multiple different 19 pathogens, including COVID-19. 20 Q If you're a specialist in every single infectious 21 disease, why are you listed as having a specialty 22 in AIDS and chronic rhinitis? 23 MS. RICCHIUTO: Objection. Misstates the 24 testimony. Misstates the document, that the 25 witness said he has never seen before, didn't</p>
<p style="text-align: right;">Page 15</p> <p>1 contribute to. 2 You can answer. 3 A I think these forms, to be honest with you, were 4 generated by someone outside that has no knowledge 5 of what my expertise actually is, and these are 6 probably stereotyped responses. 7 Again, infectious disease physicians take care 8 of every potential infection that could, and is 9 known to infect humans, and have to have expertise 10 in those areas. We are the only physicians that 11 have that accountability, and because of that it is 12 a subspecialty that we get board-certified in. 13 So even though they list these things, it's 14 within the realm of infections where we are 15 accountable to and have to be tested on and see 16 patients in relation to, but this is a very limited 17 list of all the diseases that we are trained in. 18 Q Now, how did you develop whatever information you 19 have with respect to COVID-19 virus and the 20 infections that it can cause? How did you gain 21 that information or knowledge? 22 A Okay. So I would say that understanding of the 23 virus first starts with training in virology and 24 the breadth of infectious diseases, so even though 25 this is a novel virus, we were trained, or we are</p>	<p style="text-align: right;">Page 16</p> <p>1 trained as infectious disease physicians on themes 2 and motifs related to how diseases transmit 3 themselves, how to protect the public with the 4 knowledge of those disease processes, how to 5 respond in general to viruses that do not have 6 clear treatment recommendations. 7 So on that foundation of virology, immunology 8 was built a consistent literature approach. My 9 personal strategy during the beginning of the 10 pandemic was to review literature on a daily basis, 11 usually in the morning. It was slow to start out 12 with. It was extremely fast as things ramped up. 13 But my special strategy was to review all 14 literature that had been released in the previous 15 24 hours with the use of a website called LitCovid. 16 LitCovid is a curated site that files new 17 literature as it's published into various 18 categories: Transmission, pathogenesis, 19 treatments, infection prevention, and epidemiology. 20 I used that to organize my -- and develop my own 21 literature base that was utilized by the division 22 of infectious diseases. I continued to use that 23 website in order to help grow my knowledge base. 24 I also read various journals that are maybe 25 tangentially related to COVID, specifically as it</p>

<p style="text-align: right;">Page 17</p> <p>1 relates to virology and immunology, to continue to</p> <p>2 develop those skill sets.</p> <p>3 Q So have you treated COVID basic patients?</p> <p>4 A Yes.</p> <p>5 Q And how many?</p> <p>6 A Oh -- approximately?</p> <p>7 Q Yes. Of course.</p> <p>8 A I'd say more than a hundred.</p> <p>9 Q Have you treated them as outpatients or inpatients?</p> <p>10 A Both.</p> <p>11 Q And that is over the period of the pandemic to now.</p> <p>12 A I did not treat COVID before the pandemic.</p> <p>13 Correct, yes.</p> <p>14 Q Okay. Let me show you what's been marked as Beeler</p> <p>15 Exhibit 4.</p> <p>16 (Deposition Exhibit 4 marked.)</p> <p>17 Q Now, this Exhibit A that you attached to your</p> <p>18 expert report, which is Exhibit 11, which is your</p> <p>19 curriculum vitae.</p> <p>20 A Yes, sir.</p> <p>21 Q Now, this identifies your rank at IU School of</p> <p>22 Medicine as assistant clinical professor. Is that</p> <p>23 correct?</p> <p>24 A That's correct.</p> <p>25 Q Are you on a tenure track?</p>	<p style="text-align: right;">Page 18</p> <p>1 A I will go up through promotion instead of through</p> <p>2 tenure.</p> <p>3 Q And what is the difference?</p> <p>4 A Tenure is for predominant bench researchers.</p> <p>5 Promotion is for people who are focused on clinical</p> <p>6 service. It has different -- it has different --</p> <p>7 it has a different mechanism by which you're able</p> <p>8 to meet criteria to rank up.</p> <p>9 Q Now, is this the first position, I mean the entry</p> <p>10 position, assistant clinical professor, or is there</p> <p>11 a lower rank?</p> <p>12 A No. This is --</p> <p>13 MS. RICCHIUTO: Object to form.</p> <p>14 A After graduation, the first job as an infectious</p> <p>15 disease physician in the School of Medicine, you</p> <p>16 start out as an assistant and then to associate and</p> <p>17 then to full professor.</p> <p>18 Q All with the clinical part of the name; right?</p> <p>19 A Correct.</p> <p>20 Q And what are the criteria that will be used to</p> <p>21 promote you to associate clinical professor? What</p> <p>22 would be --</p> <p>23 MS. RICCHIUTO: Objection.</p> <p>24 Go ahead.</p> <p>25 A It's extremely complex, but it's a process I'm</p>
<p style="text-align: right;">Page 19</p> <p>1 going up for this year. It has to do with</p> <p>2 qualifying, or explaining your service to the</p> <p>3 university, what it is that you did that brought --</p> <p>4 brought health to as many people as possible. It</p> <p>5 also requires you to document how you approach to</p> <p>6 the university's mission. You have to also have</p> <p>7 qualifications in either research or education as a</p> <p>8 secondary area of expertise in order to meet</p> <p>9 criteria. And then the last part of that, from</p> <p>10 going to assistant to associate, is that you need</p> <p>11 to show promise for future development. So a</p> <p>12 trajectory in your career path.</p> <p>13 Q When were you first eligible for consideration for</p> <p>14 promotion?</p> <p>15 A This year.</p> <p>16 Q Now, will the fact that you have provided an expert</p> <p>17 report and testified in support of IU's mandate</p> <p>18 policy be considered in whether or not you're</p> <p>19 promoted?</p> <p>20 MS. RICCHIUTO: Objection. Calls for</p> <p>21 speculation.</p> <p>22 A They don't -- they don't look at that.</p> <p>23 Q Okay. Have you presented -- have you informed them</p> <p>24 of that role that you are playing --</p> <p>25 MS. RICCHIUTO: Objection.</p>	<p style="text-align: right;">Page 20</p> <p>1 Q -- as part of your either application or the</p> <p>2 consideration for your promotion?</p> <p>3 MS. RICCHIUTO: Objection. I don't know who</p> <p>4 them is.</p> <p>5 A They -- if by "they" you mean the leadership for</p> <p>6 the School of Medicine, they all know me. But I</p> <p>7 have not spoken with anyone about this, and</p> <p>8 actually I haven't even turned in my application</p> <p>9 yet. It's due in October, November.</p> <p>10 Q Okay. Will you include this in your application?</p> <p>11 A No.</p> <p>12 Q Are they aware that you're doing this?</p> <p>13 MS. RICCHIUTO: Objection. Asked and</p> <p>14 answered.</p> <p>15 A I don't know.</p> <p>16 MR. BOPP: And Anne, you're entitled to make</p> <p>17 every objection you want, but I just want you to</p> <p>18 know that you're adding at least about a third more</p> <p>19 to the time that we are spending by your</p> <p>20 objections. And frankly, Anne, you know, I can get</p> <p>21 more time. If you're not making objections that</p> <p>22 the court views as warranted and meritorious, I</p> <p>23 would expect them to provide us more time. So I</p> <p>24 just implore you to let us finish this today if at</p> <p>25 all possible.</p>

<p style="text-align: right;">Page 21</p> <p>1 MS. RICCHIUTO: We will be here until 6:00, 2 not counting breaks, Jim. I implore you to ask 3 unobjectionable questions if you want it to go more 4 quickly. I'm very comfortable with my objections 5 and I appreciate the coaching, but I think I've got 6 it handled. So thank you. 7 MR. BOPP: All right. 8 Q I am looking at your resume, and starting on 9 page 1, and I'm looking for any indication that you 10 have specifically dealt with or did research in or 11 developed any expertise in the COVID-19 virus. 12 Would you point to the first entry that would 13 indicate that. 14 MS. RICCHIUTO: Objection. Misstates the 15 testimony and the document. 16 A So Indiana University School of Medicine, Director 17 of Symptomatic COVID Medical Response Team. 18 Q And where are you, sir? 19 A Sorry. First page still. Also -- 20 Q Just a second because I want to find it on here. 21 A It's the maybe third from the last line. It's the 22 last thing in my appointments. 23 Q No wonder I can't find it. Sorry about that. All 24 right. Very good. You've already testified about 25 that, I think.</p>	<p style="text-align: right;">Page 22</p> <p>1 A Yes. Well, I would say that it's assumed that 2 infectious disease doctors treat and care for COVID 3 patients. To me, it does not merit -- there's not 4 separate training in coronavirus. It is part of 5 being an infectious disease doctor. 6 Q I understand that's your position. Thank you. 7 Would you continue to look at your resume and 8 advise me where there is other entries that 9 indicate a special either research or training or 10 involvement in COVID-19. 11 A So there are no training courses in coronavirus 19 12 to my knowledge that have been developed. I have 13 done some research in coronavirus. 14 Let's see. So under Publications on page 9, 15 if you go -- actually, let's do page 10. 16 Q Okay. And where on page 10? 17 A I'm trying to find it. Sorry. 18 Q That's all right. 19 A Sorry. Page 11, third from the bottom. Page 10 on 20 the bottom. 21 Q Any other research specifically related to COVID-19 22 virus? 23 A That's all that's on this document. 24 Q Thank you. 25 Now, I found some public statements that you</p>
<p style="text-align: right;">Page 23</p> <p>1 have made about the COVID-19 virus, several of 2 which were published by IU Health. Let me show you 3 what's been marked as Beeler Exhibit 5. 4 (Deposition Exhibit 5 marked.) 5 Q And on the first page, I understand you to be 6 advising here -- correct me if I'm wrong -- is this 7 an important part of preventing the spread of 8 COVID-19 to wash your hands thoroughly enough? Is 9 that correct? 10 A I believe that hand hygiene is an important aspect 11 of control of COVID-19. It's probably not the 12 prime. It is not the prime aspect in prevention of 13 transmission, so this was commenting on a facet of 14 the prevention response. 15 Q Do you still advise that to be done? 16 A I advise good hand hygiene for all situations, not 17 just coronavirus 19. 18 Q Okay. Now, let me show you what's been marked as 19 Beeler Exhibit 6. 20 (Deposition Exhibit 6 marked.) 21 Q Now, do you recognize this article as well? It's 22 an interview of you. 23 A I'd have to review it. 24 Q Published by IU Health. 25 A I've read it. I can't tell you that I remember the</p>	<p style="text-align: right;">Page 24</p> <p>1 interview process. It's from a really long time 2 ago, back when we were talking about Stage 2. 3 Q So this is March 8, 2021, when this was published? 4 A Yeah. 5 Q If you turn to 6, you will see at the second to 6 last paragraph -- by the way, first let me ask, do 7 you still agree with the opinions you are stating 8 in this interview? 9 A The landscape of our understanding of COVID has 10 changed significantly, so I would have to be asked 11 on the specific opinions to see if the nature of 12 the science has changed around it. My 13 understanding and appreciation of the knowledge 14 base changes as the literature base changes. 15 Q All right. Now, in March of 2021, where were we on 16 the bell curve of the COVID-19 infection? Were we 17 on the deceleration side or the acceleration side? 18 MS. RICCHIUTO: Object to form. 19 A I would have to guess. I think that we were 20 decelerating in March. 21 Q Now, if you turn to page 6, second to the last 22 paragraph, you will see a list of smart things to 23 do. I think you describe wearing masks, keeping a 24 6-foot radius, washing hands, avoiding large 25 groups, disinfecting. These are all important</p>

<p style="text-align: right;">Page 25</p> <p>1 things that you should do to protect yourself.</p> <p>2 Is that what you thought at the time?</p> <p>3 A Yeah.</p> <p>4 Q All right. Do you still think that now?</p> <p>5 A Now, yes, with the exception that we have the</p> <p>6 vaccine that's also available.</p> <p>7 Q Now, what you said at that time is the last</p> <p>8 sentence. "We will only reopen successfully if</p> <p>9 people follow these guiding principles," which I</p> <p>10 think you are referring to the list I just gave</p> <p>11 you: Wearing masks, keeping 6-foot radius,</p> <p>12 et cetera. Is that right?</p> <p>13 A Yes, I believe that if there was 100 percent</p> <p>14 adherence to those, those principles, that we would</p> <p>15 avoid infections.</p> <p>16 Q Why do you say there has to be a hundred percent?</p> <p>17 A Because breaches in any of those processes could</p> <p>18 potentially lead to transmission of the virus.</p> <p>19 Q Now, so when you -- okay. So when you say reopen</p> <p>20 successfully, you mean with zero transmission rate.</p> <p>21 MS. RICCHIUTO: Object to form. Misstates</p> <p>22 this document.</p> <p>23 A I think it comes down to what we had determined was</p> <p>24 our level of success or what, at the time, my</p> <p>25 understanding of level of success was, is that, in</p>	<p style="text-align: right;">Page 26</p> <p>1 general, I don't think anyone was saying that we</p> <p>2 could completely avoid or completely control</p> <p>3 behavior so that everyone is a hundred percent</p> <p>4 adherence. There's going to be breaks.</p> <p>5 The goal would be to minimize transmissions to</p> <p>6 the extent that when there were infections that</p> <p>7 developed, they could be quickly contact traced,</p> <p>8 quarantined to avoid essentially large-scale</p> <p>9 outbreaks.</p> <p>10 We had worked through the process of how we</p> <p>11 were going to define a large-scale outbreak</p> <p>12 internally, and even though we did see some of</p> <p>13 these happen, the vast majority of them were able</p> <p>14 to be controlled with the help of public health</p> <p>15 departments and more aggressive measures, shutting</p> <p>16 things down, et cetera.</p> <p>17 Q Well, so reopening successfully includes the</p> <p>18 likelihood, if you will, that there would still be</p> <p>19 some transmission of COVID-19.</p> <p>20 MS. RICCHIUTO: Object to form. Foundation.</p> <p>21 Q Is that what you were saying?</p> <p>22 A The ideal situation is that there are no</p> <p>23 transmissions of COVID-19. I think human nature</p> <p>24 and the fact that we can't 100 percent control</p> <p>25 behavior, realistically, suggests that there's</p>
<p style="text-align: right;">Page 27</p> <p>1 going to be transmissions because of breaches in</p> <p>2 these infection prevention methodologies.</p> <p>3 Q I understand what you just said, however, I'm</p> <p>4 trying to find out what your words mean, okay, and</p> <p>5 what you were thinking.</p> <p>6 A Sure.</p> <p>7 Q And it said -- they are quoting you here -- "We</p> <p>8 will only reopen successfully," and I'm asking you,</p> <p>9 when you say reopen successfully, do you mean that</p> <p>10 there would be no -- that successful reopening</p> <p>11 would be no transmissions of COVID-19, or what rate</p> <p>12 of transmission would still rate you as a</p> <p>13 successful reopener?</p> <p>14 MS. RICCHIUTO: Object to form.</p> <p>15 A Sure. Success to me would be -- and at the time</p> <p>16 would be not having to close back down because of</p> <p>17 uncontrolled outbreaks.</p> <p>18 Q What would be an uncontrolled outbreak? What does</p> <p>19 that mean?</p> <p>20 A In the process of contact tracing, if we are not</p> <p>21 able to quarantine with enough speed to stop</p> <p>22 secondary transmissions, to me that's uncontrolled.</p> <p>23 Our mechanisms by which we prevent aren't fast</p> <p>24 enough to slow down the transmissions.</p> <p>25 Q So if you have one, that would be unsuccessful.</p>	<p style="text-align: right;">Page 28</p> <p>1 A If we had one uncontrolled outbreak?</p> <p>2 Q No, one uncontrolled transmission you couldn't</p> <p>3 control.</p> <p>4 MS. RICCHIUTO: Objection. Misstates</p> <p>5 testimony.</p> <p>6 A Yeah, I think that, from our perspective, it would</p> <p>7 be a trend of uncontrolled outbreaks.</p> <p>8 So getting back, the success for us would be</p> <p>9 how well does the infrastructure that we've built</p> <p>10 hold up against human behavior.</p> <p>11 Q I understand from the IU's briefing that there's</p> <p>12 90,000 IU students in all campuses, all right, in</p> <p>13 the system, 90,000, including graduate school.</p> <p>14 How many infections within that population</p> <p>15 would classify as an uncontrolled outbreak where</p> <p>16 reopening was not successful?</p> <p>17 MS. RICCHIUTO: Object to form.</p> <p>18 A Don't have that data.</p> <p>19 Q Well, do you have an estimate or percentage or --</p> <p>20 MS. RICCHIUTO: Objection. Calls for</p> <p>21 speculation.</p> <p>22 A I couldn't. You know, I can tell you anecdotally</p> <p>23 that we did see cases -- you know, I was part of a</p> <p>24 team of four physicians that on a daily basis --</p> <p>25 week daily basis reviewed all the positive COVID</p>

<p style="text-align: right;">Page 29</p> <p>1 cases and then looked backwards to see where it</p> <p>2 came from; did web -- contact tracing webs to</p> <p>3 figure out if we could identify where things had</p> <p>4 developed. I would say it would be the minority</p> <p>5 that we felt, either we couldn't explain where they</p> <p>6 got it or that we weren't able to move fast enough</p> <p>7 to prevent a secondary transmission.</p> <p>8 I'd say that not being able to explain where</p> <p>9 the patient got it was much more common than not</p> <p>10 being able to move fast enough in order to slow it</p> <p>11 down, even though that did become an issue maybe</p> <p>12 around the wintertime, as Indiana was surging. In</p> <p>13 the fall, wintertime period, we got slowed down by</p> <p>14 the volume, and there were secondary transmission</p> <p>15 cases.</p> <p>16 Q If because of uncontrolled transmissions of the</p> <p>17 virus that you can't control, secondary</p> <p>18 transmissions, and you said you don't have a</p> <p>19 measurement of when you would say the reopening is</p> <p>20 unsuccessful, I mean, do you have any way of</p> <p>21 measuring that or an opinion on what you would say</p> <p>22 if somebody asked you has our opening, reopening</p> <p>23 been successful? And I mean how many secondary</p> <p>24 transmissions would you need to say no?</p> <p>25 MS. RICCHIUTO: Objection. Vague. Compound.</p>	<p style="text-align: right;">Page 30</p> <p>1 Asked and answered. Misstates testimony.</p> <p>2 A Yeah, I don't really know how to answer that. You</p> <p>3 know, from my perspective, this was a moving target</p> <p>4 throughout the semester. Our strategy was to be as</p> <p>5 flexible as we possibly could be as it relates to</p> <p>6 additions of more aggressive intervention measures</p> <p>7 but also subtraction if they weren't necessary or</p> <p>8 were no longer necessary.</p> <p>9 And we met weekly with not only amongst --</p> <p>10 well, we met daily amongst the medical response</p> <p>11 team but also met weekly with leadership to discuss</p> <p>12 what the themes were that we were seeing and try to</p> <p>13 respond to those with directed countermeasures.</p> <p>14 So I thought that the process and that</p> <p>15 flexibility and our mechanism by which we were able</p> <p>16 to test, I say test hypotheses, but what I really</p> <p>17 mean we identify a problem, we come up with</p> <p>18 countermeasures, and we check to see if those</p> <p>19 countermeasures are working was very successful</p> <p>20 throughout the school year.</p> <p>21 We did have, as an example of that,</p> <p>22 large-scale athletics outbreaks that happened in</p> <p>23 some of our regional campuses. This was identified</p> <p>24 during contact tracing. We quickly found out that</p> <p>25 we were not able to move fast enough on the cases</p>
<p style="text-align: right;">Page 31</p> <p>1 before they were being transmitted, usually because</p> <p>2 of parties, and we just weren't able to fully trace</p> <p>3 based on the amount of people that were exposed.</p> <p>4 And in addition to that, the athletics</p> <p>5 departments, or the games themselves became a -- or</p> <p>6 practices became a setting where infection was</p> <p>7 likely to propagate.</p> <p>8 So after building a case and trying to</p> <p>9 identify the amount of people who had gotten</p> <p>10 infected by these procedures, made the decision</p> <p>11 with leadership to slow down athletics practices</p> <p>12 and events as things were worsening.</p> <p>13 We then tested that hypothesis over that time</p> <p>14 interval, we tested the athletes more aggressively.</p> <p>15 As the epidemiology and as they came out of their</p> <p>16 infection windows, we were able to restart the</p> <p>17 athletics.</p> <p>18 So to me that is a successful approach to a</p> <p>19 pandemic, where as long as you've got</p> <p>20 countermeasures that are working and you're able to</p> <p>21 stamp out, I guess, the embers of a fire before it</p> <p>22 turns into a conflagration and would force campuses</p> <p>23 to shut down, then that's successful.</p> <p>24 I think my main fear at the beginning was that</p> <p>25 we were going to see widespread transmission that</p>	<p style="text-align: right;">Page 32</p> <p>1 we weren't going to have the personnel available to</p> <p>2 be able to quarantine and isolate, we weren't going</p> <p>3 to have enough beds available, we weren't going to</p> <p>4 have a true appreciation for how much spread was</p> <p>5 going on just due to lack of data availability, and</p> <p>6 it never came to that head.</p> <p>7 I think, you know, obviously before the</p> <p>8 semester starts, there's a lot that's unknown, but</p> <p>9 as we worked through that process we developed a</p> <p>10 system whereby we were able to control these things</p> <p>11 as they developed.</p> <p>12 Q So your methodology, your decision-making, all the</p> <p>13 things you just mentioned, resulted in successful</p> <p>14 strategies in reducing COVID infections at IU?</p> <p>15 MS. RICCHIUTO: Object to form.</p> <p>16 A Yes, I would say that we were successful in</p> <p>17 avoiding infections of COVID. It could have been</p> <p>18 much, much worse.</p> <p>19 Q Now, when was the IU mandate on requiring COVID</p> <p>20 vaccinations for all students announced?</p> <p>21 A I don't know that date. I'm sorry.</p> <p>22 Q I wish I could remember it too. I think it was</p> <p>23 around March -- I mean May 20th, but... End of</p> <p>24 May, we could say, I guess.</p> <p>25 What was the state of the infection rate for</p>

<p style="text-align: right;">Page 33</p> <p>1 IU students at that time?</p> <p>2 A We were -- I would have to know the date and I</p> <p>3 would have to look back at our data, but I believe</p> <p>4 we were essentially in alignment with the state and</p> <p>5 were seeing decreasing epidemiology.</p> <p>6 Q Not just -- I was asking more of not the</p> <p>7 trajectory; I was asking you at what level were we</p> <p>8 at IU.</p> <p>9 A I would need clarification on what the levels are.</p> <p>10 Q Well, what percent of infection rate was there of</p> <p>11 students at the time that the mandate was</p> <p>12 announced?</p> <p>13 A I would have to look back at those numbers.</p> <p>14 Q Was it high? Medium? Low? Very low? What was</p> <p>15 it?</p> <p>16 MS. RICCHIUTO: Object to form.</p> <p>17 Q Do you have an estimate?</p> <p>18 A Well, I don't know where you would set a high</p> <p>19 versus a medium versus a low threshold. Is it</p> <p>20 relative to where we were previously? Is there a</p> <p>21 set cutoff? I mean, I can't give you an idea on</p> <p>22 slope, but that's probably all the data I have. I</p> <p>23 would have to pull up the dashboard and tell you</p> <p>24 exact percentages.</p> <p>25 Q If I said that we had an infection rate comparable</p>	<p style="text-align: right;">Page 34</p> <p>1 to what there was at the beginning of March 2020,</p> <p>2 if I said that, would that be, in your view, high,</p> <p>3 low, medium, what?</p> <p>4 MS. RICCHIUTO: Object to form.</p> <p>5 A What was the rate in March of 2020?</p> <p>6 Q It was at the very beginning when we just found</p> <p>7 out.</p> <p>8 A I don't know the rate back then. I would have to</p> <p>9 go back and look at what the rolling averages were.</p> <p>10 Q Did you advise this committee about the trajectory</p> <p>11 of the COVID-19 virus and whether and where they</p> <p>12 were and, you know, as a result of severity and</p> <p>13 therefore what measures needed to be taken?</p> <p>14 A I advised the Restart Committee as well as the</p> <p>15 Executive Leadership Committee.</p> <p>16 Q You were the one that advised them about the</p> <p>17 infection rates?</p> <p>18 A Yes.</p> <p>19 MS. RICCHIUTO: Objection. Asked and</p> <p>20 answered.</p> <p>21 Q But you don't know anything about the infection</p> <p>22 rate?</p> <p>23 MS. RICCHIUTO: Objection. Argumentative.</p> <p>24 Misstates testimony.</p> <p>25 A This is obviously a very rapidly changing pandemic.</p>
<p style="text-align: right;">Page 35</p> <p>1 I report multiple times a week on numbers that</p> <p>2 week. This is moving so fast that in order to give</p> <p>3 you an accurate response, I would really feel more</p> <p>4 comfortable going to the data itself as opposed to</p> <p>5 guessing.</p> <p>6 Q In your opinion, was the infection rate of IU</p> <p>7 students such in the end of May 2021 that requiring</p> <p>8 vaccinations for every student was warranted?</p> <p>9 A Yes.</p> <p>10 Q Why?</p> <p>11 A Because there's still COVID out there. We were</p> <p>12 still seeing infections, still seeing</p> <p>13 transmissions.</p> <p>14 In addition to that, and this is probably more</p> <p>15 of a factor in relation to uncertainty in the</p> <p>16 future, coupled with national guidance that vaccine</p> <p>17 was the most important thing that we could do for</p> <p>18 prevention, led to these discussions on the</p> <p>19 mandate.</p> <p>20 Q Does the CDC recommend vaccination mandate for</p> <p>21 anyone?</p> <p>22 A They do not recommend -- they do not comment on</p> <p>23 mandates. They do recommend vaccination for --</p> <p>24 Q Do they recommend mandating vaccinations for</p> <p>25 everyone?</p>	<p style="text-align: right;">Page 36</p> <p>1 MS. RICCHIUTO: Objection. Asked and</p> <p>2 answered.</p> <p>3 A They do not recommend vaccine mandates.</p> <p>4 Q Does the CDC?</p> <p>5 A None comment on vaccine mandates.</p> <p>6 Q So they haven't recommended it because they haven't</p> <p>7 commented on it; right?</p> <p>8 A They haven't recommended for or against.</p> <p>9 Q Okay. Do they require -- does the CDC or the FDA</p> <p>10 require their own employees to be vaccinated?</p> <p>11 A I don't know that.</p> <p>12 MS. RICCHIUTO: Objection.</p> <p>13 Q All right. Is there any state in the United States</p> <p>14 that has mandated vaccinations for college students</p> <p>15 for the COVID -- mandate COVID vaccinations for</p> <p>16 college students or above?</p> <p>17 MS. RICCHIUTO: Object to form.</p> <p>18 A You're talking about state governments mandating it</p> <p>19 for a college?</p> <p>20 Q Yes. State governments.</p> <p>21 A Not to my knowledge. But I'm not confident there.</p> <p>22 I know there are many universities that are</p> <p>23 mandated.</p> <p>24 Q Well, there's 10 percent, I understand there are,</p> <p>25 at least. 10 percent of the colleges have done</p>

<p style="text-align: right;">Page 37</p> <p>1 this.</p> <p>2 Is there any county that has mandated</p> <p>3 vaccination for the population?</p> <p>4 A Not to my knowledge.</p> <p>5 MS. RICCHIUTO: Objection.</p> <p>6 Q Is there any city that has mandated vaccinations</p> <p>7 for their citizens?</p> <p>8 A Not to my knowledge.</p> <p>9 Q Other than a few colleges and a few employers, who</p> <p>10 has mandated vaccinations for their people under</p> <p>11 their authority?</p> <p>12 MS. RICCHIUTO: Objection. Mischaracterizes</p> <p>13 the evidence and lack of foundation.</p> <p>14 A Businesses, I would say.</p> <p>15 Q I said other than employers.</p> <p>16 A Oh, sorry.</p> <p>17 Q Other than employers, some employers and some</p> <p>18 colleges, who has mandated COVID vaccination?</p> <p>19 MS. RICCHIUTO: If you know, Cole. There's</p> <p>20 been no establishment that you know every</p> <p>21 organization.</p> <p>22 MR. BOPP: Don't coach him.</p> <p>23 A I'm trying to think of who would be left out of</p> <p>24 that group, so no employers, no -- so we're talking</p> <p>25 about government entities? Is that -- I'm not</p>	<p style="text-align: right;">Page 38</p> <p>1 aware of any government entities that have mandated</p> <p>2 the vaccine.</p> <p>3 Q Now, you mentioned you had two publications</p> <p>4 regarding COVID-19. Let me show you what's been</p> <p>5 marked as Beeler Exhibit 7.</p> <p>6 (Deposition Exhibit 7 marked.)</p> <p>7 A Yes, this is one.</p> <p>8 Q Do you recognize -- this is an abstract of one of</p> <p>9 your papers. Is that this?</p> <p>10 A Yes.</p> <p>11 MS. RICCHIUTO: Object to form.</p> <p>12 A Oh, yep. Yep. I'm a co-author on this paper, yes.</p> <p>13 Q Okay. What was the research study that you were</p> <p>14 doing here? Could you describe it, please?</p> <p>15 A Yes. The main question with this study was in</p> <p>16 relation to whether or not surgical masks were</p> <p>17 protective against COVID-19, was our main question.</p> <p>18 At the time, before this was published, there</p> <p>19 was still many hospitals that were still using N95</p> <p>20 masks for care of their COVID patients and just in</p> <p>21 general kind of day-by-day work.</p> <p>22 As the CDC started shifting what their</p> <p>23 recommendations were, we decided to look at this</p> <p>24 more systematically. All of our hospitals use</p> <p>25 surgical masks for coronavirus prevention of the</p>
<p style="text-align: right;">Page 39</p> <p>1 healthcare workers.</p> <p>2 We felt that if there were failures in the</p> <p>3 mask, meaning if the mask, the surgical mask was</p> <p>4 suboptimal for protection over N95s, then we would</p> <p>5 see more COVID in hospitals that had higher</p> <p>6 prevalence of COVID in the hospitals than in</p> <p>7 hospitals that had lower prevalence of COVID.</p> <p>8 One of the big debates related to healthcare</p> <p>9 worker infections is related to, if they are COVID</p> <p>10 positive, are they getting it in the hospital</p> <p>11 related to their care for patients or are they</p> <p>12 getting it at home related to what they're doing</p> <p>13 outside.</p> <p>14 And this study suggested that you were equally</p> <p>15 likely, if not less likely, in high prevalence</p> <p>16 hospitals, to have a COVID positive healthcare</p> <p>17 worker, and effectively said that, to me, that</p> <p>18 masking was a potential viable strategy for</p> <p>19 protection of healthcare workers caring for COVID</p> <p>20 patients.</p> <p>21 Q And what kind of -- you said surgical masks. What</p> <p>22 kind of mask is that? Or N95. I'm familiar with</p> <p>23 N95. What did you mean by a surgical mask?</p> <p>24 A Surgical or medical masks usually have ear loops or</p> <p>25 ties -- sorry, gesturing over there -- but they're</p>	<p style="text-align: right;">Page 40</p> <p>1 usually two to three ply. They've been certified</p> <p>2 by OSHA. And there's a limited number--- there's</p> <p>3 actually a large number of different varieties that</p> <p>4 you can get of these masks, but like your blue or</p> <p>5 yellow surgical mask.</p> <p>6 Q Is that one right there that Anne is wearing?</p> <p>7 A Yes, that one is a medical mask, yes, or a surgical</p> <p>8 mask. They have different names, but medical or</p> <p>9 surgical or isolation mask.</p> <p>10 Q Okay. Great. And they worked as well as the N95?</p> <p>11 Is that what you said?</p> <p>12 A We didn't --</p> <p>13 MS. RICCHIUTO: Objection.</p> <p>14 A Sorry. We did not compare the surgical masks to</p> <p>15 N95s.</p> <p>16 Q Now, what's the protocol for wearing a surgical</p> <p>17 mask or an N95 mask in a healthcare facility?</p> <p>18 A Well, each facility has different protocols.</p> <p>19 Q Well, what's IU's, let's say?</p> <p>20 A IU Health's protocol for using surgical masks as</p> <p>21 opposed to N95, we use surgical masks for all</p> <p>22 patient care activities. And any patient care</p> <p>23 areas, healthcare workers are to have surgical</p> <p>24 masks on at all times.</p> <p>25 The N95s, which have a higher filtration</p>

Page 41

1 efficiency, are used in situations where there are
2 going to be large aerosols created, and those are
3 related to specific procedures like bronchoscopy,
4 intubation, CPR.

5 Q Now, you described -- and maybe I'm using the wrong
6 word when I say protocol, but you described when
7 they use it. Is there a protocol about how they
8 use it? In other words, are they reused? I mean,
9 what are they supposed to do? You know, they come
10 into the hospital, they put one on, and then when
11 they're done, what do they do? I mean, are they
12 reused? That's what I'm trying to find out.

13 MS. RICCHIUTO: Object to form. Compound.

14 MR. BOPP: Because I don't know the right
15 word.

16 A We do have a reusable protocol both for N95s as
17 well as surgical masks that was adopted from the
18 CDC guidance on this question. There was serious
19 questions about mask availability at the beginning
20 of the pandemic, and we had local shortages as
21 well, so it was something that we had to work
22 through.

23 Do you want me to work through -- do you want
24 me to explain those protocols?

25 Q No. I'm interested in what instruction the

Page 43

1 potentially infectious patient room.

2 Q And at the end of the day, do they take the mask
3 home or is it disposed of, you know, in a sterile
4 way?

5 A Sterilely discarded.

6 Q Okay. Now, what did the -- what are healthcare
7 workers told about touching the mask? In other
8 words, is it okay to touch it with your bare hands
9 and go about your business, or do you need to use
10 gloves to protect yourself against what might be on
11 the front of the mask?

12 A So the first recommendation was that we advised
13 against touching your mask but acknowledged that
14 that's almost impossible for anyone who has worn a
15 mask. And if that were to happen, hand hygiene
16 would have to be completed quickly thereafter,
17 ethanol-based hand hygiene, to make sure that
18 anything that got transferred to the hands was
19 neutralized.

20 Q All right. What role did you play in this study?
21 I mean, when I published Law Review, I always used
22 to put my name first but I may not have written it,
23 you know what I'm saying? Truth be known.
24 (Discussion held off the record.)

25 Q But, anyway, what role did you play in the study,

Page 42

1 healthcare worker is given in terms of mask use.
2 Do they, as a matter of routine, reuse them without
3 them being cleaned or processed?

4 A Gotcha. So, in general, for the surgical masks,
5 the recommendation was to, as you come into the
6 building -- and this has obviously changed over
7 time. So IU Health just recently switched their
8 protocols, and surgical masks aren't necessary now
9 for vaccinated team members who are in non-patient
10 care areas. So that's a little bit different.

11 But the expectation back then was that you
12 would come in, you would get a surgical mask, you
13 would perform all your patient care duties until
14 the surgical mask was either visibly soiled, became
15 wet, or there was any concerns related to the --
16 from the individual related to the integrity of the
17 mask.

18 In addition to that, anytime the healthcare
19 worker was exiting a room with either a coronavirus
20 patient or another viral infection that required
21 masking, they were to doff the mask, take the mask
22 off and get a new mask afterwards.

23 So the masks were continued throughout the day
24 with the exception of the fact that it was changed
25 over with integrity issues or if they had been in a

Page 44

1 this study?

2 A I did a few separate things. One, I was part of
3 the conceptual design for the study to start out
4 with. My partner, Lana Dbeibo, functioned as the
5 implementer. I did manuscript review and editing.

6 Q All right. Let me show you what's been marked as
7 Beeler Exhibit 8, which I think this is your other
8 published research paper.
9 (Deposition Exhibit 8 marked.)

10 MS. RICCHIUTO: I'd just like the record to
11 reflect that Exhibit 7 and 8 are just the first
12 page.

13 MR. BOPP: Right. Right. The abstract.

14 MS. RICCHIUTO: Yes.

15 MR. BOPP: Correct.

16 Q Is this the abstract for your other paper on COVID?

17 A Yep.

18 Q Okay. What was the research that you were trying
19 to conduct that you report in this paper?

20 A This study was just looking at patient demographics
21 and laboratory findings as it relates to trying to
22 predict what tests are associated with poor
23 outcome.

24 Q What do you mean what tests are associated with
25 poor outcome? What does that mean?

Page 45

1 A Which laboratory findings or patient demographic
2 findings.
3 Q Oh, okay. And what were your conclusions?
4 A That age and gender may impact outcome in COVID-19.
5 D-dimer, procalcitonin, and lactate dehydrogenase,
6 and BNP may serve as early indicators of disease
7 trajectory.
8 Q Now, when you say "age," what are you referring to?
9 A So age, older age, may be associated with worsening
10 outcome.
11 Q And when you say "older" -- this is becoming
12 personal, but when you say older, what do you mean?
13 A In general, the risk factors for severe disease
14 increase after 65. Some studies say 60. At this,
15 we found it at 72.7.
16 Q Okay. Now, did you examine younger people in this
17 study?
18 A Younger people.
19 Q Well, let's say college-age people.
20 A I'd have to look back on what our lowest age group
21 was or what our lowest age individual was. But
22 college, we were just looking at patients who were
23 admitted to the hospital.
24 Q Oh.
25 A So that could have been anywhere from, you know, 18

Page 47

1 Let me show you what's been marked as Beeler
2 Exhibit 12, and at the bottom, you'll see an email
3 from Tony Fauci to a Ms. Angel, a March 4, 2020,
4 which says "The severe complication of COVID virus
5 are heavily skewed towards the elderly and those
6 with underlying conditions."
7 Now, that statement, then, is consistent with
8 your study, isn't it, that you published and is
9 Exhibit 8?
10 MS. RICCHIUTO: Objection to the extent it
11 misstates the date of Exhibit 8.
12 MR. BOPP: The date of what? I'm sorry.
13 MS. RICCHIUTO: Exhibit 8.
14 MR. BOPP: His email was on March 4, 2020.
15 Oh, okay. I'm just looking up -- okay.
16 Q Will you look at Exhibit 8.
17 A A?
18 MR. BOPP: 8.
19 MS. RICCHIUTO: 8.
20 A Yes.
21 Q What's the date of the publication of your paper?
22 A February 2021.
23 Q All right. Thank you. I think that's what I said,
24 but I could be wrong.
25 All right. So back to Exhibit 12. Your study

Page 46

1 usually to whatever. Maximum.
2 Q What was your role in this study?
3 A Manuscript review and editing.
4 Q Now, if you would pull out your report,
5 Exhibit 11 -- before we get to that, let me show
6 you what's been -- well, in your report, you cite
7 the CDC's recommendations fairly frequently.
8 That's my characterization. Is Dr. Fauci the one
9 who is the head of the agency, part of the CDC you
10 frequently cite to? Is that right? Is that --
11 what's his role?
12 A What's the role of Dr. Fauci?
13 Q Yes.
14 A Dr. Fauci's the adviser to the president and head
15 of the NIH, NIAIDS. So to my knowledge, even
16 though he does discuss things with the CDC because
17 of their overlapping relationships, he does not
18 come up with CDC guidelines.
19 Q Okay. Let me show you what's been marked as Beeler
20 Exhibit 12.
21 (Deposition Exhibit 12 marked.)
22 Q Now, your paper -- I'm sorry, your study, which is
23 Beeler Exhibit 8, concerning the indicators of risk
24 for COVID infection, was published February of
25 2021.

Page 48

1 is consistent with Dr. Fauci's opinion?
2 A I apologize. Can I go back?
3 Q Sure.
4 A So actually, I would need -- I would need to look
5 back at this text, because the Epub date is
6 July 2020, and I think we put this together before
7 the new year, so I would have to go back and
8 confirm. I'm not entirely sure when we submitted.
9 Q Okay. All right. Fair enough.
10 So my question was, your paper, Exhibit 8, is
11 consistent with the statement made by Dr. Fauci in
12 this email. "The severe complication of
13 coronavirus are heavily skewed towards the elderly
14 and those with underlying conditions." Is that
15 correct?
16 A I don't think that our paper identified all of
17 those risk factors, but I agree with Dr. Fauci's
18 statement.
19 Q Okay. Now, is it also true that the data supports
20 the proposition that college-age students are one
21 of the least -- one of the age populations with the
22 least risk of COVID-19, of adverse effects of a
23 COVID-19 infection?
24 MS. RICCHIUTO: Object to form.
25 A Relative to other age groups, college-age students

<p style="text-align: right;">Page 49</p> <p>1 have less chance of mortality than other age</p> <p>2 groups.</p> <p>3 Q Now, the only other age group that has less is,</p> <p>4 isn't this true, is those younger than people of</p> <p>5 college age?</p> <p>6 A That's my understanding.</p> <p>7 Q Okay. And that it goes up, the risk of an adverse</p> <p>8 effect of a COVID-19 infection goes up as you go</p> <p>9 through the age groupings toward the highest level,</p> <p>10 which is people over 85. Is that correct?</p> <p>11 A The risk of mortality goes up.</p> <p>12 Q Okay. And then what's the relative risk of</p> <p>13 mortality between college-age students and those</p> <p>14 over 85?</p> <p>15 A Are you looking for an exact number?</p> <p>16 Q An estimate.</p> <p>17 A The relative risk?</p> <p>18 Q Uh-huh.</p> <p>19 A Can I say lower?</p> <p>20 Q Lower among college age?</p> <p>21 A What's the relative risk of a college-age person</p> <p>22 having a bad outcome versus an elderly person</p> <p>23 having a bad outcome?</p> <p>24 Q Yes. The way I hoped to say it was how much of a</p> <p>25 greater risk does people over 85 have from a COVID,</p>	<p style="text-align: right;">Page 50</p> <p>1 adverse effect of a COVID infection than do</p> <p>2 college-age students?</p> <p>3 A The average older individual has a much higher risk</p> <p>4 of mortality than the average college-age</p> <p>5 individual.</p> <p>6 Q Isn't it true that in the state of Indiana it's 600</p> <p>7 times more greater risk of those over 85 than those</p> <p>8 who are college age?</p> <p>9 MS. RICCHIUTO: Object to form.</p> <p>10 A That number seems reasonable to me, but I would</p> <p>11 have to confirm. I don't know that number.</p> <p>12 Q And isn't it true that in the United States, as a</p> <p>13 whole, that the risk of mortality for those over 85</p> <p>14 is 800 -- over 800 times more than college-age</p> <p>15 students?</p> <p>16 A I'd have to look at that, those numbers. I don't</p> <p>17 know it off the top of my head.</p> <p>18 Q So what I -- I don't want to know your opinion on</p> <p>19 this, but the way I look at that is, people who are</p> <p>20 older -- you have a, what would you call it, a risk</p> <p>21 profile. The older you are, the greater the risk.</p> <p>22 And we're talking orders of magnitude greater risk.</p> <p>23 Hugely greater risks.</p> <p>24 Now, are there other diseases that have kind</p> <p>25 of the reverse? In other words, greater risk the</p>
<p style="text-align: right;">Page 51</p> <p>1 younger you are?</p> <p>2 A Certainly.</p> <p>3 Q Okay. And an examples of those would be?</p> <p>4 A Sexually transmitted infections, HIV, suicide, car</p> <p>5 accidents.</p> <p>6 Q Polio?</p> <p>7 A There's really no polio anymore so I can't speak to</p> <p>8 that. Potentially back then it was associated with</p> <p>9 that, but that's multifactorial.</p> <p>10 Q All right. Now, when you determine strategies</p> <p>11 regarding how to deal with infection rates among</p> <p>12 populations, do you take into account the relative</p> <p>13 risk?</p> <p>14 A Among populations, we take into account the risk to</p> <p>15 the population that we're serving, yes.</p> <p>16 Q Now, is there any governmental agency that is</p> <p>17 recommending a vaccination mandate for everyone</p> <p>18 over 85?</p> <p>19 A There's no governmental agency that I know of</p> <p>20 that's recommending for or against a mandate.</p> <p>21 Q Has any state or local government imposed a mandate</p> <p>22 that everyone over 85 get vaccinated?</p> <p>23 A Not to my knowledge.</p> <p>24 Q What is the survival rate of college-age students</p> <p>25 who have been infected by COVID-19?</p>	<p style="text-align: right;">Page 52</p> <p>1 A I would say extremely, extremely high. 99 percent</p> <p>2 or more.</p> <p>3 Q Is the rate less for those as you get older?</p> <p>4 A Is the survival rate less for individuals based on</p> <p>5 age?</p> <p>6 Q Yes.</p> <p>7 A Yes.</p> <p>8 Q Let me show you what's been marked as Beeler</p> <p>9 Exhibit 14.</p> <p>10 (Deposition Exhibit 14 marked.)</p> <p>11 Q This is an article in techstartups.com, and -- but</p> <p>12 they're reporting on CDC data of survival rates for</p> <p>13 adults and other age groups. Is this rate</p> <p>14 reported -- and please take a look at it --</p> <p>15 accurate at the time, which was November 21, 2020?</p> <p>16 A These numbers seem consistent with my</p> <p>17 understanding.</p> <p>18 Q If you can go to the bottom of page 2, and you'll</p> <p>19 see the summary, quick summary of the CDC COVID</p> <p>20 survival rate. Age 0 to 19, 99.997 percent,</p> <p>21 then -- oh, my, this printing isn't very good, is</p> <p>22 it? Well, because the printing screwed up, sorry,</p> <p>23 there's a second chart which is the R0. What is</p> <p>24 the R0? What is R0?</p> <p>25 A The R naught is a statistical term usually used for</p>

<p style="text-align: right;">Page 53</p> <p>1 a static phase illness, so an illness that when</p> <p>2 introduced into a population isn't mutating at a</p> <p>3 high rate. That is the average amount of people</p> <p>4 who will be infected after an individual is exposed</p> <p>5 to the population.</p> <p>6 So an R naught of two means that for every one</p> <p>7 infected person, two other people will become</p> <p>8 infected.</p> <p>9 Q Okay. For me to understand that, are you referring</p> <p>10 to the rate of infection? The spread of the</p> <p>11 infection? Is that what you're referring to?</p> <p>12 A You know, I think kind of a layman's way of looking</p> <p>13 at it is how infectious a virus is at a given point</p> <p>14 in time. The R naught changes over time. And that</p> <p>15 value, called an Rt, or an effective reproductive</p> <p>16 number, can go up and down depending on the,</p> <p>17 essentially efficacy of control of the epidemic, or</p> <p>18 pandemic in this case.</p> <p>19 If it's less than one, it typically means</p> <p>20 things are getting under control. If it's greater</p> <p>21 than one, it typically means things are going to</p> <p>22 continue to spread.</p> <p>23 Q So the chart we see regarding the R0 numbers on</p> <p>24 page 2 at the top, is that consistent with what you</p> <p>25 understood those numbers to be in November of 2020?</p>	<p style="text-align: right;">Page 54</p> <p>1 A I think this is highly debatable, even though I</p> <p>2 understand the source, but I think the methodology</p> <p>3 behind calculation of the R naught really from the</p> <p>4 beginning of the pandemic has been questionable.</p> <p>5 The original numbers that came out of China have</p> <p>6 been challenged.</p> <p>7 The effective reproductive number is the</p> <p>8 foundation for how we set what the herd immunity</p> <p>9 threshold is. Given the -- I would -- I would</p> <p>10 trust these numbers a lot more if we understood</p> <p>11 with certainty what the asymptomatic fraction of</p> <p>12 the disease is.</p> <p>13 But, unfortunately, since we don't have -- a</p> <p>14 lot of this math and a lot of these equations came</p> <p>15 from measles data, data where we have clear</p> <p>16 physical manifestations in the vast majority of</p> <p>17 people who get infected, or herds that get infected</p> <p>18 with rinderpests.</p> <p>19 In situations where there's a large</p> <p>20 asymptomatic fraction where patients never develop</p> <p>21 symptoms but potentially are infectious, that</p> <p>22 number falls apart and can be inaccurate compared</p> <p>23 to how infectious the virus actually is.</p> <p>24 Q Now, this article is claiming to report CDC</p> <p>25 numbers.</p>
<p style="text-align: right;">Page 55</p> <p>1 A I have no doubt that the CDC did the math, but I</p> <p>2 think all the math needs to be taken with a caveat</p> <p>3 that the amount of uncertainties with the virus</p> <p>4 lead to potentially problematic calculations and</p> <p>5 wide confidence intervals around these numbers.</p> <p>6 Q So you would agree, I gather you would agree that</p> <p>7 the CDC information can be subject to proper</p> <p>8 analysis on whether or not it's accurate or not</p> <p>9 based upon other data.</p> <p>10 A I think the CDC is an advising agency that is</p> <p>11 making recommendations based on the current state</p> <p>12 of the evidence. I think they do a fair to</p> <p>13 excellent job in acknowledging their limitations.</p> <p>14 And I think that as far as national guidelines go,</p> <p>15 it's probably the highest quality that we could use</p> <p>16 given the expertise in those areas.</p> <p>17 Q But you can still question them, I gather.</p> <p>18 A Oh, absolutely. Yeah. Yeah. I mean, and I think</p> <p>19 it's -- you know, part of the response to a growing</p> <p>20 pandemic is that there needs to be questions and</p> <p>21 challenges throughout all these processes.</p> <p>22 Q All right. Now, finally I'm going back to your</p> <p>23 report, which is Exhibit 11. If you turn to</p> <p>24 page 2, paragraph 9, here you are mentioning</p> <p>25 increased risks of certain types of individuals,</p>	<p style="text-align: right;">Page 56</p> <p>1 and of course you list adults over 45 as having an</p> <p>2 increased risk.</p> <p>3 How reliable is that, that there's an</p> <p>4 increased risk? Do we have enough data to be able</p> <p>5 to say that is the case?</p> <p>6 A Just the age over 45 or all factors?</p> <p>7 Q Well, the age ranges, you know, that you've already</p> <p>8 testified it increases and all that.</p> <p>9 A Right. Exactly. There's a gradient as age goes</p> <p>10 higher. I would say the quality of evidence is</p> <p>11 very high in this area, and has been duplicated and</p> <p>12 reproduced on large scale.</p> <p>13 Q Now, paragraph 10, COVID-19 more often affects</p> <p>14 children less severely than adults. Are you --</p> <p>15 when you're talking about less severely, are you</p> <p>16 limited to mortality or are you also talking about</p> <p>17 other injury that could be attendant as a result of</p> <p>18 the infection?</p> <p>19 A Sure. I think the spectrum of morbidity --</p> <p>20 certainly mortality is less in this age group, but</p> <p>21 the spectrum of morbidity is just different in this</p> <p>22 age group. And if you talk about hospitalizations,</p> <p>23 I would say they're at much lower chance of being</p> <p>24 hospitalized but they might have a higher</p> <p>25 probability of having long COVID syndromes, where</p>

Page 57

1 certain symptoms related to their COVID persist for
2 months, years, after -- not years, we don't know
3 yet, but long duration after their initial
4 infection.
5 Q Do we have data on that or is this a concern?
6 A No, we have data on this.
7 Q And you're saying the symptoms. I guess I was
8 being more specific than symptoms, you know,
9 injury.
10 A Well, I would --
11 MS. RICCHIUTO: Object to form.
12 Q I know that's not a technical term. Sorry.
13 A What's the question? I think I interrupted you.
14 Q I wasn't talking about symptoms that you can
15 recover from. I was talking about any long-term
16 adverse injury.
17 A Well, I think, you know, form and function symptoms
18 probably are -- relate to some sort of damage
19 that's happened related to the virus. I just don't
20 think we have a hundred percent understanding of
21 what that damage is and how to treat it, how to
22 reverse it at this point.
23 But these COVID long haulers or long COVID
24 syndrome patients do have major changes to their
25 life. They do present -- that's actually one of

Page 59

1 what it was.
2 A The New York Times since the beginning of the
3 pandemic has been tracking campus-related COVID
4 cases since the beginning.
5 Q Oh, themselves?
6 A Yeah. And, I mean, they're using publicly
7 available information through the dashboards that
8 we present from the universities.
9 Q Okay. That's an explanation. Thank you.
10 The next section you're discussing herd
11 immunity. What is the basis -- turn to
12 paragraph 21. What is the basis for your statement
13 that the scientific community had not yet
14 determined the percentage of people needed to
15 achieve herd immunity for the COVID?
16 A The basis of it was the fact that the original
17 calculations related to the R naught from the
18 Chinese was highly suspect. Because of that, it's
19 been challenged. R naught recalibration was
20 attempted, and this led to varying numbers that
21 were reported based on the math calculations on how
22 infected -- how infectious the virus was in the
23 asymptomatic fraction. So I've seen anything from
24 60 to 80 percent for being herd immunity
25 thresholds.

Page 58

1 the more common outpatient COVID questions that we
2 get in infectious diseases, is how to manage these
3 long-term symptoms. We actually have separate
4 clinics that handle that just because of how
5 prevalent it is specifically in the younger age
6 groups.
7 And, unfortunately, right now it's just
8 symptom control since we don't have a good
9 understanding of the pathophysiology.
10 Q What's the incidence of this, long-term symptoms?
11 A I had read that 30 percent of some college-age
12 students develop -- after infection with COVID
13 develop long COVID symptoms, syndromes.
14 Q Okay. How about other age groups?
15 A I don't remember off the top of my head. Certainly
16 any age group it's possible, but I don't have those
17 numbers.
18 Q Paragraph 17, you're referring to a New York Times
19 report. Do you know the basis of the report, what
20 study or scientific basis they had for that?
21 A I would need to go back and review. Are you
22 talking about what the primary article was that
23 they're citing?
24 Q Yes. I assume there was. I don't know that there
25 is, but I wondered if you knew if there was and

Page 60

1 But, again, the issue with herd immunity --
2 Q 60 to 80 percent of what? I'm sorry.
3 A Individuals immune.
4 Q Oh, okay.
5 A So herd immunity is the theory that if a certain
6 percentage of the population is immune to a given
7 pathogen -- and this is a static pathogen that's
8 not evolving -- then the immune fraction will
9 protect the nonimmune fraction. And it's different
10 depending on how infectious the virus is.
11 Generally the more infectious the virus is, the
12 lower threshold for herd immunity because the more
13 people will benefit.
14 In the case for COVID, we don't really have a
15 good understanding of how infectious the virus is
16 because it's so hard to diagnose asymptomatic
17 disease.
18 The other thing that makes herd immunity
19 philosophy difficult to apply to COVID is because
20 of the evolution of the virus and the variants
21 leading to potential breakthrough infections even
22 despite antibody presence or neutralizing antibody
23 presence.
24 So if immunity was static, if we knew that
25 immunity was durable for this virus over time, then

<p style="text-align: right;">Page 61</p> <p>1 we could trust the percentage of the population</p> <p>2 that has been exposed to coronavirus being immune.</p> <p>3 But we're learning, and have learned, that immunity</p> <p>4 is not static with this virus, and things do change</p> <p>5 specifically as it relates to variants of concern.</p> <p>6 There's also ample substrates. The longer</p> <p>7 that the coronavirus remains in the population,</p> <p>8 each vulnerable individual that gets infected is</p> <p>9 the opportunity for further mutations in the virus.</p> <p>10 And eventually, just by evolutionary theory, the</p> <p>11 virus will develop ways to bypass the current</p> <p>12 immune stress.</p> <p>13 We see that with other coronaviruses as well.</p> <p>14 That's why you get the common cold multiple times</p> <p>15 in your life.</p> <p>16 Q Does an acceptable calculation of herd immunity</p> <p>17 include those that have been previously infected</p> <p>18 and have antibodies?</p> <p>19 A That's what I challenge. I don't know for this.</p> <p>20 Because, since the immunity to the virus after a</p> <p>21 natural infection is suspect and could change over</p> <p>22 time depending on how the variants spread, the math</p> <p>23 that you did three months ago might not be the same</p> <p>24 math today with a different variant circulating in</p> <p>25 the population.</p>	<p style="text-align: right;">Page 62</p> <p>1 So it's really, really hard to tell, and since</p> <p>2 it's a changing, complex, non-closed system -- I</p> <p>3 mean, herd immunity was developed in rinderpests,</p> <p>4 right, in cows, which you had a set group of cows</p> <p>5 and you knew you needed to vaccinate this many cows</p> <p>6 in order to protect the rest of them.</p> <p>7 This is a much more complex virus with a large</p> <p>8 asymptomatic fraction that's developing mutations</p> <p>9 that are associated with viral breakthrough.</p> <p>10 Q What are other infectious diseases that manifest</p> <p>11 mutation and new variants? What are other ones?</p> <p>12 A Influenza, HIV. All living organisms develop</p> <p>13 mutations to bypass stressors. It's evolutionary</p> <p>14 theory. So everything that is a living organism</p> <p>15 has the potential to do this, not just pathogens.</p> <p>16 But some notable examples where it makes these</p> <p>17 calculations very challenging are things like HIV,</p> <p>18 things like influenza where you have massive</p> <p>19 genetic changes in mutations that prevent us from</p> <p>20 really being able to document how -- how likely</p> <p>21 control is.</p> <p>22 Q What would you look to, to try to determine if herd</p> <p>23 immunity had been achieved? What kind of evidence,</p> <p>24 empirical evidence or whatever would you look for?</p> <p>25 A I would expect to see zero or very low new positive</p>
<p style="text-align: right;">Page 63</p> <p>1 cases over a one- to two-week period as a rolling</p> <p>2 average.</p> <p>3 I would expect to see zero or very close to</p> <p>4 zero percent positivity in those testing, with</p> <p>5 adequate testing going on, so there wouldn't have</p> <p>6 to be zero testing.</p> <p>7 And even then, I think that's error prone</p> <p>8 because we don't know if there's reservoirs yet for</p> <p>9 this, even nonhuman reservoirs for this infection</p> <p>10 that may, like flu, set up shop and produce</p> <p>11 substrate for further divisions, further</p> <p>12 replications that could lead to mutations that</p> <p>13 could reinfect us like seasonal influenza virus.</p> <p>14 Q So zero or close to zero reinfections.</p> <p>15 A Infections and percent positivity.</p> <p>16 Q And -- all right.</p> <p>17 A Over time too is the other important thing. It</p> <p>18 couldn't be just like one day where herd immunity,</p> <p>19 it would have to be durable.</p> <p>20 Q Right. So what size population are you talking</p> <p>21 about when you're talking about zero or one or very</p> <p>22 small number? You're talking about 90,000</p> <p>23 students? Are you talking about 3.5 million in the</p> <p>24 state of Indiana? 300 million in the United</p> <p>25 States? 350 million? What --</p>	<p style="text-align: right;">Page 64</p> <p>1 A Yeah, I think it would be any population that you</p> <p>2 decide to look at, because each individual</p> <p>3 population, it could eventually reach a local herd</p> <p>4 immunity.</p> <p>5 So if you look at a church, for instance, like</p> <p>6 my church, if everyone got vaccinated at my church,</p> <p>7 we could pretty safely go to church and not have to</p> <p>8 do anything, and we could compensate for the small</p> <p>9 amount of individuals who didn't manage to mount an</p> <p>10 immune response to the vaccine.</p> <p>11 If you make that group bigger, we would still</p> <p>12 need those same numbers. We would need a certain</p> <p>13 number of functional immunity that would be</p> <p>14 manifested by no infections and a low positivity</p> <p>15 rate and testing that proves that we aren't seeing</p> <p>16 breakthrough or new mutations, so surveillance of</p> <p>17 some sort.</p> <p>18 It doesn't really matter the size of the</p> <p>19 population, but you could effectively have focal or</p> <p>20 local herd immunity in a population with high rates</p> <p>21 of immune protection.</p> <p>22 Q Turn to page 5, paragraph 24. You say that each of</p> <p>23 the COVID-19 vaccines have been proven safe and</p> <p>24 effective. What is the measure of, let's start</p> <p>25 with effective. How do you measure its</p>

Page 65

1 effectiveness? That's a value term so --

2 A It is.

3 Q -- what would be the measure of effectiveness of

4 the COVID vaccination that would lead you to this

5 conclusion?

6 A So --

7 THE WITNESS: Go ahead.

8 MS. RICCHIUTO: Object to form.

9 A You're right, it is a judgment call. But I think

10 that I would compare it to other vaccines that are

11 also widely available and recommended and even

12 mandated. To me, an effective vaccine would be

13 something that was at least as good as a flu shot,

14 which I would say is, from any year, 40 to

15 60 percent protective against morbidity and

16 mortality from the infection, from influenza.

17 Q Okay. So you could still get the infection, but

18 you just -- it would ameliorate the effect. Is

19 that what you're saying?

20 A Well, so there's two pieces of the coin for the

21 influenza vaccine, and probably with any vaccine,

22 but it's been studied most in influenza, where the

23 immunity that is provided by the influenza vaccine

24 not only decreases your probability of the virus

25 setting up shop and causing infection, but it also

Page 67

1 Q Okay. So that means, though, that there's a range,

2 depending upon the vaccine, of, say, 5 to -- what

3 did you say? 70 percent for Johnson & Johnson?

4 A Oh, Johnson & Johnson was like 70 percent and then

5 95 percent was Pfizer. That's the range right now,

6 uh-huh.

7 Q So it would be a 3 to 30 percent chance that the

8 vaccine would have no beneficial effect.

9 A So those --

10 MS. RICCHIUTO: Object to form.

11 A Those numbers for viral efficacy are specifically

12 looking at avoidance of clinical presentation with

13 COVID. And it's different in each study on how you

14 define that.

15 It does not comment on, necessarily, even

16 though we have more data in this specifically with

17 Pfizer, on if you do get infected what does the

18 vaccine do to protect you against dying from the

19 infection, from spreading it to other people.

20 So there are other variabilities outside of

21 mortality and even presentation to the hospital

22 that I would consider to also be beneficial aspects

23 of the vaccine even beyond what was reported in

24 that area. And those numbers for all the vaccines

25 are generally higher than the viral efficacy.

Page 66

1 decreases your probability if you get infected for

2 having to go to the hospital sick and dying from

3 the infection.

4 So there's two benefits. One, one is more

5 encompassing; the other is another secondary

6 benefit even if the vaccine doesn't prevent you

7 from getting infected.

8 Q So you believe, it's your opinion that the three

9 COVID vaccinations, vaccines have achieved that

10 level, 40 to 50 percent level, that makes them

11 effective.

12 MS. RICCHIUTO: Objection. Misstates

13 testimony.

14 A Yeah, I believe that the three available

15 coronavirus vaccines way outpace the influenza

16 vaccine in effectiveness.

17 Q What percentage would you place -- you mentioned

18 the 40 to 50 percent for the influenza vaccine.

19 What would you place the COVID vaccinations at?

20 A Depends on the vaccine. The viral efficacy of the

21 Moderna vaccine is about, gosh, what was it, like

22 90 percent; 95 percent for the Pfizer; like

23 70-something percent for Johnson & Johnson. Which

24 I think are all above what I would consider to be

25 an average successful influenza vaccine season.

Page 68

1 So Johnson & Johnson, even though it's only

2 70 percent, there's benefit up 80 to 90 percent,

3 depending on the study you're looking for, for

4 preventing some of those other things.

5 Q So what about the 10 percent or whatever that are

6 left over, that it's not effective with, in

7 providing any benefit. What -- what about them?

8 A Yeah. I mean the vaccine is not a hundred percent

9 effective. There's some people who get the vaccine

10 that are just not going to mount an immune

11 response. And the risk factors for those are

12 patients with bad immune systems, patients who are

13 on immunosuppressant medications.

14 In that group, I would include the extremes of

15 age. We know most about the elderly, and you can

16 define that range really -- it probably is like a

17 gradient, like you mentioned before, is the older

18 you get, the lower probability you're going to not

19 respond to the vaccine.

20 And in those situations, those individuals, as

21 far as we know, have a lower chance of developing

22 antibody response, seems like a lower chance of

23 developing protection against the virus, so

24 clinical manifestations of infection.

25 And then the other thing that I would mention

Page 69

1 is that they're also more likely to present to the
2 hospital and die despite vaccination.
3 Q How effective -- I'm taking you back to your
4 Exhibit 6, your interview, March 8, 2021. If one
5 observed the things you recommended at that
6 point -- wearing a mask, keeping 6-foot radius,
7 washing hands, avoiding -- this is on page 6 again,
8 avoiding large groups, disinfecting -- what
9 effectiveness -- how effective would that be?

10 MS. RICCHIUTO: Objection. Asked and
11 answered.

12 A So I would say just from experience in having to
13 interview all of these cases and to look through,
14 talk through all the cases, that it's the
15 Swiss cheese model of, you know, system failure,
16 where each, each system that you add, or each
17 protective mechanism that you have is additive
18 towards the total net protection that you have.

19 And all of these individual factors are much
20 less potent than actually having an immune
21 individual. So masking by itself, even though it's
22 a great step in the right direction, it was the
23 only tools we had available here to prevent
24 infection, we learned that, and continue to learn
25 that it is not -- it is not 100 percent effective.

Page 71

1 50 percent protection, it really is so setting
2 dependent it would almost have to be carried out in
3 a lab, which is not real world. It would need to
4 all be in vitro, it would need to be experiments on
5 mannequins, and I wouldn't trust that data to be
6 actually representative of what would happen in
7 real life, so you can't really compare.

8 All we know for sure is that you're going to
9 get transmissions despite your best policies as
10 application of these preventative measures because
11 none of them, even in concert, are going to be able
12 to really effectively account for human behavior,
13 and they're not going to account for the fact that
14 there's still a lot unknown about how transmissible
15 this disease is and in which ways it's able to
16 spread from person to person.

17 Q Well, of course there's a failure rate. You said
18 there's a failure rate involving vaccinations too.
19 So, I mean, I'm just trying to find out if you have
20 an opinion on the degree of success or
21 effectiveness that implementing, if people actually
22 did implement these, which you were suggesting, we
23 could reopen successfully.

24 A Yeah, I would say --

25 MS. RICCHIUTO: Objection. Asked and answered

Page 70

1 It's probably not even close to that.

2 Q Well, and I'm trying to get you to put the number
3 on what you've put on the vaccinations, you know.
4 I mean, you have an opinion of that back in March
5 of 2020. You said if we observe these general
6 guiding principles, we could successfully reopen.
7 So how successful can that be?

8 A Right. Again, and, you know, going back to that
9 discussion, the success was with the knowledge that
10 we weren't going to prevent all infections because
11 we knew that these mechanisms were not perfect.
12 But we knew that these mechanisms, whenever they
13 couldn't be applied -- it's a big problem of human
14 nature; right? So the reason that I can't give you
15 a number here is because no one can study how
16 adherent people are to these regimens and what
17 happens in the systems.

18 And in addition to that, we still don't have a
19 great understanding on how COVID spreads. We have
20 very good data. We don't have excellent, you know,
21 clear data on aerosol route versus droplet routes.
22 If the ventilation systems are going to change how
23 that works. Given all the unknown variables as
24 relates to that, even if a study was to say if you
25 implement all these measures, you can have

Page 72

1 multiple times.

2 A I'd say pragmatically, you know, real world,
3 presenting all of these things is -- and getting
4 everyone to adhere to it at all times is not
5 reasonable.

6 I can say that encouraging it and coaching to
7 it and doing the best you can on this, which is
8 probably what the average college student is going
9 to do, is going to be much, much, much less
10 successful than a fire and forget, like a vaccine.

11 There's no, you know, maintenance that's
12 required for a vaccine, there's no decision that an
13 individual has to make after they've gotten the
14 vaccine to whether or not they pull their mask off
15 or, you know, cluster together or go to a party.
16 It takes all of those factors off the table.

17 Q Now, your study involved surgical masks or N95
18 masks.

19 A Sorry, we did not include N95. We just looked at
20 surgical masks.

21 Q Oh, sorry, I misunderstood then. Thank you for
22 that correction.

23 Have you studied the use of masks by the
24 general population and the -- you know, so have you
25 studied that?

Page 73

1 A I have not done a study where I've been an author
2 but there have been numerous studies that have
3 compared the efficacy of cloth masks, which is what
4 the general public is wearing, to surgical masks
5 and N95s, and that's the gradient of benefit.

6 Q So what do they say?

7 A The least effective masks by usual orders of
8 magnitude are the cloth masks. Surgical masks are
9 in most studies a little bit better than cloth
10 masks. And then N95s are dominant.

11 Now, the conditions in which these studies are
12 performed is usually in a laboratory where they're
13 using mannequins that are breathing out known
14 concentrations of virus so they can measure exactly
15 how effective they are, so there is some doubt, to
16 be honest with you, related to the difference
17 between N95s and surgical masks.

18 But consistently throughout these studies, the
19 cloth masks, even though they do offer protection,
20 there's a wide range of protection based on the
21 material that's used, based on how it covers the
22 mouth and the nose, and based on the fit around the
23 face.

24 Q Well, what about, you know, when you get done for
25 the day? You know, you go home and you -- I mean,

Page 75

1 The main mechanisms are just a barrier. You
2 have a physical substance that's in place from the
3 droplets or the aerosols that are floating through
4 the air. They hit the barrier instead of hitting
5 your mucous membranes and therefore is not able to
6 set up infection.

7 The other thing that's a possibility is
8 electrostatic repulsions in the masks, so there is
9 a little bit of charge associated in the mask, and
10 the droplets and the variants, the small viruses,
11 might be pushed away from the masks due to those
12 gradients.

13 The other possibility is that the humidity
14 that's created between the masks and the face and
15 the mouth actually acts as a protective barrier
16 itself, so you almost have two layers of protection
17 there.

18 Now, the filter part of it is probably what
19 differs, I would say, the most between the masks.
20 And that's why we talked about filtration
21 efficiency. Filtration efficiency accounts for a
22 lot of those other things. How likely is it for a
23 particle, of whatever size that you're looking at,
24 to get through a particular material. In general,
25 they found that cloth masks let more things pass

Page 74

1 do I understand correctly that the idea of the mask
2 is that it would catch a COVID virus and prevent it
3 from going in and therefore you don't get the
4 infection? Is that the mechanism?

5 A Partially. So --

6 Q What else?

7 A The purpose of the mask is a barrier but it's a
8 bidirectional barrier. The mask is beneficial not
9 only for prevention of acquisition of the virus,
10 and it does that by a number of mechanisms, but
11 also by prevention of an infected individual who
12 doesn't know they're infected and infectious
13 spreading it to other people. So we also consider
14 it to be source control.

15 Q Now, let's set those people aside yet because I
16 want to talk about somebody protecting themselves
17 from others.

18 A Yes.

19 Q That side. So how does it work when -- to protect
20 you from obtaining the virus from the outside
21 environment?

22 A So actually when it gets down to it, each mask
23 probably -- each type of mask, cloth versus
24 surgical versus N95, probably works a little bit
25 different.

Page 76

1 than N95s and then surgical masks.

2 Q Now, does the virus get caught in the mask?

3 A Yes.

4 Q Adhere to it in some way or another?

5 A Yes.

6 Q All right. Now, if that would be the case, and you
7 take it off and don't dispose of it in a sterile
8 way like you described what healthcare providers
9 do, or workers do, I mean, if I grabbed ahold of
10 this cloth mask I'm showing you, you would put it
11 on your hands, I assume, right, and you could
12 introduce it by rubbing your eyes or --

13 A I think that's theoretically possible. And at the
14 beginning of the pandemic, this was one of the
15 areas -- and we've been very slow to change this in
16 the medical community, despite really strong
17 evidence and epidemiological data that does not
18 support what we consider to be a contact mode of
19 spread.

20 So contact transmission means that after you
21 touch something, you can inoculate it into an area
22 that can become infected and then you can set up
23 infections. We just haven't seen that bear out in
24 the epidemiology. In those situations, we would
25 see infections over long distances; right? Someone

<p style="text-align: right;">Page 77</p> <p>1 touched a doorknob, I touched a doorknob and got</p> <p>2 it. Really what we're seeing vast majority of the</p> <p>3 time is someone is infectious and breathing on me</p> <p>4 and I get exposed to them and I get infected.</p> <p>5 Now, it's still, I guess, theoretically</p> <p>6 possible, and because of that the CDC still</p> <p>7 recommends, you know, doing hand hygiene after you</p> <p>8 touch your mask. And in the hospital we wear gowns</p> <p>9 and gloves to -- and wash our hands, obviously,</p> <p>10 after we see patients who have COVID.</p> <p>11 But the CDC, as well as my understanding of</p> <p>12 the data and the current kind of approach to this</p> <p>13 says that contact transmission is a very, very low</p> <p>14 mechanism by which this can spread, if it's any</p> <p>15 mechanism by which it can spread.</p> <p>16 Q Okay. Interesting. All right.</p> <p>17 Now, turn to paragraph 25, please. Over the</p> <p>18 last month or so, has there been increased evidence</p> <p>19 of side effects of vaccines in college age?</p> <p>20 A I'm aware of a few datasets maybe over the last few</p> <p>21 months that have suggested an association with</p> <p>22 myocarditis, pericarditis, with an increased</p> <p>23 prevalence of vaccine -- post vaccine fever and</p> <p>24 systemic symptoms for 24 hours after vaccine. And</p> <p>25 then the Johnson & Johnson association with the</p>	<p style="text-align: right;">Page 78</p> <p>1 cerebrovascular sinus thrombosis, or clotting</p> <p>2 disorders, in college-age students.</p> <p>3 Q And am I right that those manifestations of side</p> <p>4 effects, if you will, of a COVID vaccination, are</p> <p>5 particularly manifest in the younger age people</p> <p>6 than the older age people?</p> <p>7 A They have a higher probability of developing those</p> <p>8 syndromes, both in response to COVID infection</p> <p>9 itself, but also in response to the vaccine. But</p> <p>10 in response to COVID, the prevalence after COVID</p> <p>11 infection itself is higher than after the vaccines.</p> <p>12 Q I've heard the concept of, in this area, of known</p> <p>13 unknowns. In other words --</p> <p>14 A (Inaudible) of some sort?</p> <p>15 Q I know, it sounds like an oxymoron, but, anyway, it</p> <p>16 took a while to understand it. But is that,</p> <p>17 particularly when we start with a new vaccine, we</p> <p>18 test it because we know that there will be -- it's</p> <p>19 highly likely that there will be side effects, at</p> <p>20 least some side effects?</p> <p>21 A Sure.</p> <p>22 Q So we test them to find that out, okay, that, in</p> <p>23 other words, we don't know what they are at the</p> <p>24 beginning, but we think it's, based on experience</p> <p>25 and the science and everything else, it's highly</p>
<p style="text-align: right;">Page 79</p> <p>1 likely there will be such a thing, and so we test</p> <p>2 it in order to find that out. Is that correct?</p> <p>3 A All vaccines go through Stage III trials that</p> <p>4 investigate that question.</p> <p>5 Q Right. Because we know that there are very likely</p> <p>6 to be unknown side effects that we don't know yet</p> <p>7 that will manifest itself in the study.</p> <p>8 MS. RICCHIUTO: Object to form. Lack of</p> <p>9 foundation.</p> <p>10 Q Is that correct?</p> <p>11 A The point of Phase III trials is to identify the</p> <p>12 side effect profile of the vaccine. Leave it</p> <p>13 there, yes.</p> <p>14 Q Did they do Phase III testing of these three</p> <p>15 viruses?</p> <p>16 A Large-scale Phase III testing -- sorry, of three</p> <p>17 viruses or vaccine?</p> <p>18 Q Vaccines.</p> <p>19 A Yes. Large-scale, multicenter, international</p> <p>20 trials on the three vaccines.</p> <p>21 Q Why didn't they find these three side effects that</p> <p>22 are now manifesting themselves? Why is that?</p> <p>23 A Likely because they're occurring in very, very,</p> <p>24 very small numbers.</p> <p>25 Q Even despite widespread large-scale testing?</p>	<p style="text-align: right;">Page 80</p> <p>1 A Testing --</p> <p>2 MS. RICCHIUTO: Object to form.</p> <p>3 A Despite testing?</p> <p>4 Q Trials. That's the word I meant. Sorry.</p> <p>5 A Yeah. I mean, this is really an unprecedented push</p> <p>6 for vaccine, and we've got more people getting a</p> <p>7 vaccine than could ever be expected with any other</p> <p>8 vaccine in human history, so there's going to be I</p> <p>9 would consider some extremely, extremely rare</p> <p>10 potential consequences of the vaccine.</p> <p>11 And I would say I'd be hesitant to even use</p> <p>12 consequences because at this point right now we're</p> <p>13 in the association versus causation kind of debate</p> <p>14 with these things. We know that there seems like</p> <p>15 there's an association around these vaccines. We</p> <p>16 don't know exactly what's driving that. But given</p> <p>17 that we're -- gosh, millions of people are getting</p> <p>18 vaccinated with the vaccine, we have much tighter</p> <p>19 lens than we normally would for any other vaccine</p> <p>20 in history to identify some of those extremely rare</p> <p>21 concerns.</p> <p>22 Q Turn to page 6, paragraph 30. What do we know</p> <p>23 right now about the immunity rate of those that</p> <p>24 have already had COVID-19? What do we know right</p> <p>25 now?</p>

Page 81

1 MS. RICCHIUTO: Object to form.
2 A I'm not sure what an immunity rate is.
3 Q Well, if you have a hundred people that had the
4 COVID infection, how many would have a long-term
5 immunity?
6 MS. RICCHIUTO: Object to form.
7 A So I think the problem I have with the term is that
8 immunity is a complex assessment of someone. Do
9 you just use antibody response? Is it antibody and
10 T cell. Is it clinical immunity? Is it based on a
11 test that we're using?
12 So what we do know about the clinical immunity
13 from patients who are previously infected with
14 COVID is that it seems like it is pretty durable.
15 So that there's evidence of antibody that's around
16 for long durations of time.
17 Now, the issue that we are seeing with natural
18 infection is that it does wane over time, it does
19 go down. And it may be that the vaccines, we're
20 having some early data now, have a more durable
21 immunity that's set up in the memory cells than
22 natural infection.
23 The other reason that I just want to be clear
24 in that immunity is multifaceted is that breadth of
25 immunity is also important here, especially in an

Page 83

1 probability of having your 24 hours of fever and
2 systemic symptoms after your first dose as opposed
3 to your second dose.
4 So essentially you're getting three doses of a
5 vaccine, of an immune bolus. So your immune system
6 responds to your natural infection; the second time
7 it sees it, you develop your kind of fever; and the
8 third time you see it, you may develop a fever but
9 it tends to be mild.
10 These are generally self-limiting. And
11 actually there's a lot of talk right now about if
12 we should be doing three doses in everyone, at
13 least evidence mounting in people who, like solid
14 organ transplant patients who have
15 immunosuppressant drugs on hand.
16 Each subsequent exposure that we actually have
17 to the virus, each essentially booster we get,
18 whether it by natural sources or immunization
19 sources, is beneficial, we can see as it relates to
20 the degree of immunity that develops. But antibody
21 level-wise, T cell-wise, memory-wise.
22 Q Let me show you what's been marked as Exhibit 17.
23 (Deposition Exhibit 17 marked.)
24 Q There is a study by Rachael Raw. Are you familiar
25 with this study?

Page 82

1 evolving virus. And there's early signal, there's
2 another study actually came out a few days ago,
3 that suggests that the virus does not induce
4 antibodies or types of antibodies that can respond
5 as well to variants, certain variants of concern.
6 The other thing I would mention is that in the
7 more recent study, those who have been vaccinated
8 tend to have higher levels of antibody than those
9 who have had asymptomatic disease or mild disease,
10 in particular, but probably all forms of natural
11 infection.
12 So even though we talk about immunity for both
13 natural infection and vaccine-induced immunity,
14 they are very much different, and there is a
15 difference expectation, I would say, developing
16 between the two mechanisms by which you develop
17 protection.
18 Q Have we seen that there is a risk of being
19 vaccinated if you have had a COVID infection?
20 MS. RICCHIUTO: Object to form.
21 A Yes. The only risk is that if you -- that I'm
22 aware of, based on my understanding of the data, is
23 that if you've previously had a COVID infection and
24 you're getting a two-dose series of vaccine, like
25 Pfizer and Moderna, then you have a higher

Page 84

1 A I need to review it.
2 Q You may of course.
3 A Yes, this is the study I was citing.
4 Q All right. Very good. Thank you.
5 A Can I make a caveat here, though?
6 Q Of course.
7 A It hasn't been peer reviewed yet. So -- I'm not
8 aware that it has been. I tend to watch
9 "med-archive" but -- but it's hard to say with
10 certainty until it really has been peer reviewed.
11 Q But as I understand it, you relied upon it in your
12 testimony you just gave.
13 A Yes. Sometimes it's the best data that we have and
14 sometimes we have to use "med-archive" which I
15 think is fine discussing these things and using it,
16 but it always has to come with that caveat, right,
17 that peer review process may change.
18 Q All right. Turn to page 7, paragraph 34. So if I
19 understand 34, as long as they have not had an
20 immediate or severe allergic reaction to a COVID
21 vaccine or its ingredients, then people, regardless
22 of their underlying medical conditions, can receive
23 the vaccination. Is that right?
24 A The only contraindication for the COVID vaccine is
25 an allergic reaction to the vaccine or the vaccine

Page 85

1 components. And even then, if you've had an
 2 allergic reaction to Pfizer or even Moderna, you
 3 could get the Johnson & Johnson. Or if you've had
 4 allergic reaction to the Johnson & Johnson, you
 5 could get the Pfizer or Moderna. They don't have
 6 overlapping components.
 7 Q Now, I'm assuming IU isn't claiming to be in the
 8 position of making medical treatment decisions. Is
 9 that right?
 10 A Correct.
 11 MS. RICCHIUTO: Object to form.
 12 A Correct.
 13 Q And so would it be your opinion that even though an
 14 attending physician has advised a patient not to
 15 have the COVID vaccine because of an underlying
 16 medical condition other than this one, that IU
 17 should just override that --
 18 MS. RICCHIUTO: Object to form.
 19 Q -- and require it anyway?
 20 A What happens functionally is that our exemption
 21 process takes into account not just
 22 immunocompromising conditions but any condition
 23 that the primary provider feels like would exempt
 24 their patient from their list.
 25 Now, we stay in alignment with what the CDC

Page 87

1 And even some of those patients may benefit
 2 from getting the vaccine. If the provider who has
 3 a relationship feels very strongly and they've got
 4 a medical basis for their rationale, we work with
 5 them in order to decide what's best.
 6 Q What do you mean decide what's best? You have a
 7 mandate, you're either going to enforce or not
 8 enforce; right? You either have an exemption
 9 you're going to grant or not grant.
 10 A Right, this is the discussion we're going to have,
 11 if we grant the exemption or not.
 12 Q But ultimately IU decides that.
 13 A By working with the provider.
 14 Q I understand you want to talk to them but, I mean,
 15 I'm getting down to like the legal state of affairs
 16 here, that IU ultimately makes the decision, not
 17 the attending physician, no matter; right?
 18 MS. RICCHIUTO: Object to form. Misstates the
 19 testimony. No foundation.
 20 MR. BOPP: Go ahead.
 21 A We review all medical exemptions. We apply the CDC
 22 criteria and work with the provider in order to
 23 decide if the patient meets exemption criteria.
 24 Q And then that's the decision that IU makes.
 25 A IU makes the decision on whether or not a patient

Page 86

1 recommends, but work with the provider in order to
 2 provide education, because there's a lot of
 3 providers that don't understand that certain
 4 pathophysiologies are not necessarily
 5 contraindications to the vaccine. Ultimately, we
 6 work with them in order to help decide what's in
 7 the patient's best interest.
 8 Q "We" meaning IU?
 9 A The medical response team, the four docs that are
 10 part of the medical response team, review all of
 11 the medical exemptions that are submitted and then
 12 reach back to the provider who signs the sheet that
 13 says I don't want my patient to get it because of
 14 XYZ. Very frequently we ask for more information,
 15 but it's -- we try to set up a dialogue to decide
 16 and if they've got a good rationale.
 17 I mean, there's going to be a bunch of things
 18 like you mentioned that are good indications not to
 19 get the vaccine. So if I've got a patient, for
 20 instance, that's on retuximab, which is a
 21 medication that doesn't allow antibodies to form,
 22 doesn't make any sense to give the vaccine right
 23 now, so we would 100 percent back that. But there
 24 does need to be a dialogue since there are no firm
 25 contraindications from the CDC.

Page 88

1 meets exemption criteria based on our conversation
 2 with the provider.
 3 Q Okay. So -- okay. So you just mentioned taking a
 4 drug, which I don't remember the name of, that
 5 would prevent the development of antibodies. That
 6 would be a reason not to take a vaccine; right?
 7 A Correct. Yeah.
 8 Q Okay. So there are actually other conditions other
 9 than severe and immediate allergic reaction that
 10 can justify not taking the vaccine.
 11 A So I think, I think it's probably semantics, which
 12 is my fault, but retuximab, that medication, those
 13 patients can safely get a COVID vaccine, but we
 14 allow them to defer until there's a good time point
 15 where they can get the vaccine to increase their
 16 probability of developing antibodies.
 17 And there's a number of different conditions
 18 like that, including pregnancy and breast-feeding
 19 and being on steroids and being on chemotherapy or
 20 getting a solid organ transplant. I mean, there
 21 are a lot of conditions where timing may not be
 22 optimal, and we work through that based on what
 23 their requested time is to get the vaccine or when
 24 they felt like, with their provider, would be safe
 25 to get the vaccine and usually work with them on

<p style="text-align: right;">Page 89</p> <p>1 that.</p> <p>2 Q What other infectious diseases does IU require</p> <p>3 biweekly testing?</p> <p>4 A Bi --</p> <p>5 Q Of the students for. What other infectious</p> <p>6 diseases?</p> <p>7 A There are no other infections that are of the</p> <p>8 consequence of COVID-19 that require surveillance</p> <p>9 testing to that level.</p> <p>10 Q Of the consequence of COVID-19. What do you mean</p> <p>11 by that?</p> <p>12 A So in the setting -- so I think our ability to</p> <p>13 control the virus is contingent on our ability to</p> <p>14 identify asymptomatic individuals and quarantine in</p> <p>15 order to prevent spread.</p> <p>16 Failure to do that leads to spread, not only</p> <p>17 within our community, the vulnerable populations,</p> <p>18 but also outside our community to the counties and</p> <p>19 other people who may be vulnerable.</p> <p>20 So in order for us to understand where our</p> <p>21 disease is at, what our prevalence is, what our</p> <p>22 exposed or vulnerable groups are, testing is the</p> <p>23 best way to diagnose and to understand.</p> <p>24 Q Do IU students die from any other infectious</p> <p>25 diseases than COVID?</p>	<p style="text-align: right;">Page 90</p> <p>1 A Certainly.</p> <p>2 Q What are they?</p> <p>3 A Influenza kills college-age students every year.</p> <p>4 Q Like how many at IU in the last year?</p> <p>5 A We had almost no influenza at all because of the</p> <p>6 COVID preventative measures.</p> <p>7 Q Okay. How about the year before?</p> <p>8 A I don't know those numbers.</p> <p>9 Q What other infectious diseases do they die from?</p> <p>10 A Meningococcus. I don't know those numbers, but</p> <p>11 there's a lot of infections that are spread in the</p> <p>12 college area that we try to protect them against by</p> <p>13 vaccination. Influenza. We vaccinate against</p> <p>14 meningococcus, we vaccinate against -- all of these</p> <p>15 are usually diseases that are associated with close</p> <p>16 cohorting, partying in dorms and living in</p> <p>17 apartment buildings that just tend to be syndemic</p> <p>18 with infectious -- with college-age groups.</p> <p>19 So we don't test regularly for these because</p> <p>20 it's challenging to test regularly for them and</p> <p>21 also because our preventative measures with the</p> <p>22 vaccines make that not necessary.</p> <p>23 Q So they disappeared. All those infectious diseases</p> <p>24 that disappeared as far as their infection rate and</p> <p>25 morbidity and mortality rate, they disappeared?</p>
<p style="text-align: right;">Page 91</p> <p>1 MS. RICCHIUTO: Objection to form. Misstates</p> <p>2 the testimony.</p> <p>3 A Yeah, they have not disappeared but they've become</p> <p>4 very rare in the setting of vaccination.</p> <p>5 Q Where and how do you measure rareness? By what</p> <p>6 measure?</p> <p>7 A You know, it's still possible. It's a lot less</p> <p>8 than what it would be without vaccination. So last</p> <p>9 year we didn't have any influenza virus, really,</p> <p>10 that circulated. I'd have to look at the previous</p> <p>11 year to tell you how low it was. But I would</p> <p>12 define rare as comparing it to the county influenza</p> <p>13 rates.</p> <p>14 Q Okay. I'm sorry, what? County?</p> <p>15 A The county influenza rates. So if the influenza</p> <p>16 rate in the vaccinated college population was less</p> <p>17 than the influenza rate in the county, I would say</p> <p>18 that that is a protective intervention.</p> <p>19 Q So Bloomington, Monroe County.</p> <p>20 A Recently.</p> <p>21 Q So IU, Monroe County in Bloomington.</p> <p>22 A Right, right. Exactly, yeah, yeah.</p> <p>23 Q Now, you mentioned protecting people in the</p> <p>24 community as one of the goals, purposes. Does IU</p> <p>25 prohibit students from going into the community?</p>	<p style="text-align: right;">Page 92</p> <p>1 A We do not.</p> <p>2 Q What is the current state of requirements in</p> <p>3 Bloomington? For instance -- there's other</p> <p>4 campuses; but, for instance, Bloomington, for the</p> <p>5 community to protect themselves? What are they</p> <p>6 requiring? Are they requiring masks --</p> <p>7 A To my knowledge --</p> <p>8 Q -- for unvaccinated people?</p> <p>9 A Yeah, not to my knowledge, there's no measures in</p> <p>10 place right now, with the exception of maybe group,</p> <p>11 group size limitations.</p> <p>12 Q Do they mandate vaccination?</p> <p>13 A No.</p> <p>14 Q Do they require social distancing?</p> <p>15 A I don't know if individual businesses do, but the</p> <p>16 government does not.</p> <p>17 Q I'm talking about the government.</p> <p>18 So is it your conclusion from that, that they</p> <p>19 don't care about their own people that could get --</p> <p>20 that there are vulnerable people that could get an</p> <p>21 infection?</p> <p>22 MS. RICCHIUTO: Object to form.</p> <p>23 Q That they don't -- they don't care about them?</p> <p>24 They don't what? They're not taking reasonable</p> <p>25 measures to protect them? What would be your</p>

<p style="text-align: right;">Page 93</p> <p>1 thought about what Bloomington is doing?</p> <p>2 MS. RICCHIUTO: Object to form. Compound.</p> <p>3 Lacks foundation.</p> <p>4 A I am not privy to the discussions that go on in the</p> <p>5 Bloomington government. From -- and I can't really</p> <p>6 comment on the politics around whether a mandate is</p> <p>7 reasonable and legal at that level.</p> <p>8 From my perspective, and a public health</p> <p>9 perspective, it makes sense to have the most amount</p> <p>10 of people vaccinated as possible in order to</p> <p>11 protect the people that can't mount an immune</p> <p>12 response.</p> <p>13 Q Can an individual who cannot mount an immune</p> <p>14 response, the vulnerable people, one of the</p> <p>15 categories you were talking about, what steps can</p> <p>16 they take to protect themselves?</p> <p>17 A I think we looked back at that original -- I forget</p> <p>18 what the first article was when we talked about,</p> <p>19 you know, 6-foot distancing and masking and</p> <p>20 avoiding large crowds, which is what we would</p> <p>21 recommend. But, again, those are going to be not</p> <p>22 perfect and they're going to be incomplete. And if</p> <p>23 they've got family members -- maybe they are able</p> <p>24 to protect themselves, but if they've got family</p> <p>25 members that are out in society, they could bring</p>	<p style="text-align: right;">Page 94</p> <p>1 that back to them.</p> <p>2 So despite our best efforts at creating</p> <p>3 bubbles around vulnerable people, it's incomplete,</p> <p>4 just like the previous interventions prior to the</p> <p>5 vaccine were incomplete.</p> <p>6 Q Now, what percentage of the population in</p> <p>7 Bloomington, for instance, would you expect to be</p> <p>8 in the category you're describing, who cannot mount</p> <p>9 an immune response? What's the nature of that?</p> <p>10 How do we measure that number?</p> <p>11 MS. RICCHIUTO: Objection. Compound.</p> <p>12 Q Let's say there's 60,000 people who are not</p> <p>13 students that live in Bloomington.</p> <p>14 A I've got no way of understanding the individual</p> <p>15 comorbidities of a population of a county.</p> <p>16 Q Well, or the state or the nation or whatever. I</p> <p>17 mean, how serious a problem is this based on how</p> <p>18 many people could be within the category of</p> <p>19 vulnerable people?</p> <p>20 A Yeah. I think that there's two ways of looking at</p> <p>21 vulnerability, and I think it comes down to</p> <p>22 infectiousness; right? So there's not really a</p> <p>23 huge difference in infectiousness with the</p> <p>24 exception of maybe less-than-ten-year-olds as it</p> <p>25 relates to COVID itself. So if everyone is --</p>
<p style="text-align: right;">Page 95</p> <p>1 everyone over ten is equally likely to become</p> <p>2 infected after a certain exposure, what we're</p> <p>3 talking about is risks afterwards, after infection.</p> <p>4 So, to me, those risk factors that we talked</p> <p>5 about, you know, age being very common, is</p> <p>6 something that's obviously outside of control and</p> <p>7 very hyperprevalent in all of our communities. The</p> <p>8 fraction of the population older than 65 grows</p> <p>9 every year.</p> <p>10 The other thing that I would say is that the</p> <p>11 other risk factors for having severe disease and</p> <p>12 bad outcomes include things that are as</p> <p>13 hyperprevalent as high blood pressure,</p> <p>14 cardiovascular disease.</p> <p>15 So, I mean, a lot of these risk factors, I</p> <p>16 would expect probably the majority of people in</p> <p>17 Monroe County to have after they get to be 50, but</p> <p>18 I don't know those exact numbers.</p> <p>19 Q That's not what I asked you about. I asked you</p> <p>20 about what you said. You said that there is a</p> <p>21 population that cannot mount an immune response and</p> <p>22 that getting vaccinated would not work with them.</p> <p>23 Okay? So they don't have the ultimate protection</p> <p>24 that you would hope a vaccination would perform.</p> <p>25 A Gotcha.</p>	<p style="text-align: right;">Page 96</p> <p>1 Q How many people are there, I mean, in a population?</p> <p>2 A So remember the main, the main --</p> <p>3 Q Is this prevalent? I mean, is there one maybe in</p> <p>4 Bloomington or is there a dozen or a thousand or</p> <p>5 20,000? You know, half of the population? What</p> <p>6 are we talking about?</p> <p>7 MS. RICCHIUTO: Objection. Compound.</p> <p>8 Q Of course it was. I threw out a lot of numbers but</p> <p>9 I want you to pick one.</p> <p>10 A Yeah, yeah, I get it. So it's a gradient with age;</p> <p>11 right? So as you get older, your risk of not</p> <p>12 mounting an immune response gets worse -- or your</p> <p>13 risk of not mounting an effective immune response</p> <p>14 gets more common. So the older you get the chance</p> <p>15 that you're going to respond to a vaccine the same</p> <p>16 that a younger person would respond to the vaccine</p> <p>17 becomes less and less.</p> <p>18 Q Okay, people over 65 then. What percentage?</p> <p>19 A But even over 50; right? So it's going to be maybe</p> <p>20 less over 50, it's going to be maybe less over 40.</p> <p>21 Q I understand that, the comparison. What I'm asking</p> <p>22 for is some number to measure how many people are</p> <p>23 we talking about that are at risk. What percent of</p> <p>24 the population?</p> <p>25 MS. RICCHIUTO: Objection. Asked and</p>

Page 97

1 answered.

2 A It's a gradient of risk depending on the age group.

3 And I would also say that --

4 Q Well, pick an age group and tell me.

5 A What percentage of Monroe County population is over

6 50?

7 Q No, of course I didn't ask that. I asked what

8 percentage of the population over 50 would you

9 expect not to be able to mount an immune response.

10 What are we talking about?

11 A It's not an exact answer.

12 MS. RICCHIUTO: Object to form.

13 A And that's why I'm trying to get clarity on the

14 question, because a person over 50 might develop

15 antibody response, it just might not be as much

16 antibody response as someone who is older. And is

17 that antibody response enough for them with their

18 other comorbidities that are going on that might be

19 listed, like decreasing their chance of developing

20 a response? I don't know.

21 Q Doctor, I used the words you used, so you must know

22 what words you used and what they mean. The

23 population that cannot mount an immune response. I

24 just want some idea of some percent of some -- of

25 the population that that would apply to.

Page 99

1 out there. Those people are vulnerable. And it's

2 probably a larger percentage of our population than

3 we appreciate.

4 Q Page 8, please, paragraph 42. Now, did you write

5 that paragraph?

6 A I did.

7 Q Do you literally mean that in your expert opinion

8 the degree of unknowns associated with all of

9 Dr. McCullough's statements, do you really mean all

10 of his statements? You don't agree with a single

11 one of his statements?

12 MS. RICCHIUTO: Object to form.

13 A I explicitly address the statements that I have

14 issues with.

15 Q Okay. All right. So we should -- okay. So we

16 should view that paragraph as referring to what

17 statements you've addressed in your report, not

18 every statement that's made in his report.

19 MS. RICCHIUTO: Object to form.

20 A I addressed my rebuttals to his concerns that I

21 disagreed with.

22 Q Okay. Very good. Page 9, this is at the end of

23 paragraph 45, "In total, calculations like those

24 set forth by Dr. McLaughlin -- McCullough, I'm

25 sorry, are highly error prone because of

Page 98

1 MS. RICCHIUTO: Objection. That has been

2 asked and answered.

3 A I cannot estimate that percent. I would guess that

4 it would be relatively high just because of all the

5 comorbidities that are associated.

6 Q I'm not talking about comorbidity.

7 A Comorbidities put you at risk for failing to mount

8 an immune response.

9 Q But some do and some don't.

10 A Right.

11 Q Okay. I'm asking for what you stated. How many

12 would be, whatever the cause, not be able to mount

13 an immune response?

14 MS. RICCHIUTO: Objection.

15 Q What percentage of the population?

16 MS. RICCHIUTO: Asked and answered.

17 Argumentative. Jim, I understand you don't like

18 the answer but you've gotten --

19 MR. BOPP: No.

20 MS. RICCHIUTO: -- an answer multiple times.

21 MR. BOPP: I've gotten no answer and that's

22 why I'm asking it.

23 A I can't give you an answer.

24 Q Okay. Well, then fair enough. Thank you.

25 A I think that from my perspective, those people are

Page 100

1 uncertainty related to the included variables."

2 Isn't what you are saying inherent in this

3 entire discussion? In other words, that you, for

4 instance, were just going on and on about all the

5 error prone or variables that we just don't have a

6 real certain handle on. I mean, isn't that one of

7 the problems with this area, is that there's so

8 much, you know, that we haven't precisely

9 determined? Okay?

10 A I think that there are --

11 MS. RICCHIUTO: Object to form.

12 Sorry, Cole.

13 Compound.

14 A I think that there are areas related to COVID that

15 remain uncertain. I think there are areas related

16 to COVID that we've built actually a really solid

17 evidence base of and we have more concrete and more

18 confident data. But I'd be remiss if I didn't say

19 that the scientific community is evolving and we

20 have to respond to new data as it comes about.

21 This particular comment was related to his

22 calculations, the long arithmetic he did for the

23 calculation of herd immunity. And like we talked

24 about previously, the herd immunity equation really

25 is based on a lot of variables that change over

<p style="text-align: right;">Page 101</p> <p>1 time. And a calculation today might be completely</p> <p>2 different than a calculation tomorrow with an</p> <p>3 evolving virus.</p> <p>4 So there's assumptions that are built into all</p> <p>5 of those modeling equations that I think we can't</p> <p>6 take for granted, and I think that certainly we've</p> <p>7 already seen how they can fall apart over time.</p> <p>8 Q Well, what about the accuracy of that calculation</p> <p>9 at the time he made it?</p> <p>10 A The problem is that we don't have a really accurate</p> <p>11 representation of the R naught, the effective</p> <p>12 reproductive number.</p> <p>13 Q And we also don't know how many have had COVID that</p> <p>14 have immunity.</p> <p>15 A Correct.</p> <p>16 Q Right? We don't know how many who have had COVID</p> <p>17 and also took the virus because there's a potential</p> <p>18 big overlap; right?</p> <p>19 A Wait. Sorry.</p> <p>20 Q The vaccine.</p> <p>21 A Okay. Okay.</p> <p>22 Q Sorry.</p> <p>23 A Yeah.</p> <p>24 Q I'm sorry about that.</p> <p>25 A You're right. Yes, we don't know that overlap in</p>	<p style="text-align: right;">Page 102</p> <p>1 the Venn diagram.</p> <p>2 Q We don't. We don't know that. And which he</p> <p>3 acknowledges, of course, I mean.</p> <p>4 I think we already got into 45 about people</p> <p>5 who -- you know, problems with their immune system.</p> <p>6 Let me ask you about 55 on page 12. I</p> <p>7 understand that IU announced yesterday that they're</p> <p>8 lifting the mask mandate, making it optional for</p> <p>9 fully vaccinated people. Do you understand that?</p> <p>10 A Yep.</p> <p>11 Q Did you participate in that decision or were</p> <p>12 consulted in any way?</p> <p>13 A The medical response team was involved. I wasn't</p> <p>14 part of the main decision, but one of my</p> <p>15 compatriots was.</p> <p>16 Q Okay. What's the basis for that decision? It was</p> <p>17 going to be lifted on July 31 --</p> <p>18 A Right.</p> <p>19 Q -- as I understand it.</p> <p>20 A Very high percentage of vaccination uptake so far,</p> <p>21 very, very low county epidemiology, and low amounts</p> <p>22 of people on campus.</p> <p>23 Q So is this temporary? In other words, they may</p> <p>24 reinstate it when more people get back at campus?</p> <p>25 Is that what --</p>
<p style="text-align: right;">Page 103</p> <p>1 A Well, I think all decisions need to be made based</p> <p>2 on what's happening with numbers. So, yes, it</p> <p>3 could very well come back. I hope it doesn't. But</p> <p>4 if we're seeing increased spread amongst</p> <p>5 individuals that could be mitigated, or if we need</p> <p>6 to add another, you know, wall of protection, then</p> <p>7 masks would probably be the first thing to come</p> <p>8 back.</p> <p>9 Q Do you have a Twitter account?</p> <p>10 A I do.</p> <p>11 Q And you tweet and retweet?</p> <p>12 A Occasionally I've been known to retweet in the</p> <p>13 past.</p> <p>14 Q What do you retweet?</p> <p>15 A I usually will retweet medical-related stuff that I</p> <p>16 think is either interesting or thought provoking.</p> <p>17 Q Let me show you what's been marked as Beeler</p> <p>18 Exhibit 36.</p> <p>19 (Deposition Exhibit 36 marked.)</p> <p>20 Q Now, I had trouble printing this, okay? So let me</p> <p>21 describe. As you can see on the front page in the</p> <p>22 upper left-hand corner, you see Cole Beeler</p> <p>23 retweet. And it says the New England Journal of</p> <p>24 Medicine. And then there's a statement and then</p> <p>25 there's a blank space; right?</p>	<p style="text-align: right;">Page 104</p> <p>1 Well, in that blank space, as you turn the</p> <p>2 next page, that's a screen shot that also shows</p> <p>3 your -- the original statement about the New</p> <p>4 England Journal of Medicine, and then what was in</p> <p>5 the blank space, the yellow.</p> <p>6 And --</p> <p>7 A Do you know when this is from, if I can interrupt?</p> <p>8 Q Well --</p> <p>9 A Maybe April of 2020?</p> <p>10 Q That sounds -- yes, there it is, down there, right.</p> <p>11 A Okay.</p> <p>12 Q Yeah, right. Is this -- do you agree, this is one</p> <p>13 of the reasons masks are being used or required, is</p> <p>14 that even though they may not be particularly</p> <p>15 helpful in stopping COVID transmission, let's say,</p> <p>16 that they make people feel safe?</p> <p>17 MS. RICCHIUTO: Objection. Lack of</p> <p>18 foundation.</p> <p>19 A No, I don't believe that. I think -- I think this</p> <p>20 is a very fascinating read because, at the time, it</p> <p>21 was around the time that we were having a lot of</p> <p>22 debates from the IU Health System perspective on if</p> <p>23 we were going to be universally masking.</p> <p>24 What we were seeing is actually asymptomatic</p> <p>25 spread to our healthcare workers from patients who</p>

<p style="text-align: right;">Page 105</p> <p>1 came in for syndromes unrelated to COVID, maybe</p> <p>2 they were just getting a surgery or something. We</p> <p>3 eventually found out that they were COVID positive,</p> <p>4 and our healthcare workers were getting infected.</p> <p>5 So we were having a lot of talk about universal</p> <p>6 masking. But at the time, the culture and evidence</p> <p>7 to support universal masking was not there.</p> <p>8 And -- but when we switched over, there was a</p> <p>9 lot of community praise for the universal masking.</p> <p>10 I think a lot of it was because of perception that</p> <p>11 I'm now protected because I'm wearing this mask and</p> <p>12 everyone around me is wearing this mask.</p> <p>13 So even though we know now that that's not the</p> <p>14 main -- there's now data that suggests that</p> <p>15 universal masking actually does protect in the</p> <p>16 healthcare environment, and as much as you can mask</p> <p>17 in the community, that's also protective and</p> <p>18 decreasing the rates, I still think that there is a</p> <p>19 cultural shift that's happened with masks where</p> <p>20 people just feel safer wearing them, which I think</p> <p>21 is fine. And we definitely support from the IU</p> <p>22 side of things, if you're an individual feeling</p> <p>23 safer of wearing a mask, regardless of your level</p> <p>24 of risk, keep wearing your mask.</p> <p>25 Q Now, the New England Journal of Medicine article,</p>	<p style="text-align: right;">Page 106</p> <p>1 which is the one, two, three -- and go to the</p> <p>2 second page at the top, it says "wearing a mask</p> <p>3 outside health care facilities offers little, if</p> <p>4 any, protection from infection."</p> <p>5 Did you agree with that statement at the time?</p> <p>6 A Yeah, at the time, there were large-scale studies</p> <p>7 that suggested, usually during influenza season,</p> <p>8 that looked at masking and did not show a benefit</p> <p>9 in acquisition of influenza. And, actually, even</p> <p>10 one of them showed worsening of influenza.</p> <p>11 But since that time, just because of the COVID</p> <p>12 pandemic, there's been large-scale studies that</p> <p>13 have contradicted those studies, that have</p> <p>14 suggested, at least for COVID, that mask wearing</p> <p>15 protects against transmission.</p> <p>16 Q Okay. Let me show you also what's been marked as</p> <p>17 Beeler Exhibit 39 -- 37. Sorry.</p> <p>18 (Deposition Exhibit 37 marked.)</p> <p>19 Q Now, this was February 5 of 2020. This is another</p> <p>20 email from Dr. Fauci to someone, Sylvia. "Masks</p> <p>21 are really for infected people to prevent them from</p> <p>22 spreading infection to people who are not infected</p> <p>23 rather than protecting uninfected people from</p> <p>24 acquiring an infection."</p> <p>25 Do you agree with that statement?</p>
<p style="text-align: right;">Page 107</p> <p>1 A Not anymore.</p> <p>2 Q Would you have agreed with that in February of</p> <p>3 2020?</p> <p>4 A Probably. Again, we had really poor quality data.</p> <p>5 We didn't have large-scale data. And the evidence</p> <p>6 that we did have suggested it was more potent for</p> <p>7 those who were infectious as source control as</p> <p>8 opposed to those who were not infected. But this</p> <p>9 is old.</p> <p>10 Q Yeah. So what's the rate of protection that can be</p> <p>11 afforded by a mask from an uninfected person</p> <p>12 acquiring the infection?</p> <p>13 A Can you rephrase? I'm sorry. What's the rate of</p> <p>14 protection that you can get wearing a mask from --</p> <p>15 like how much does a mask protect you</p> <p>16 percentage-wise?</p> <p>17 Q Yes, let's say. Yeah. I mean --</p> <p>18 A I think -- what type of mask are we talking about?</p> <p>19 Q The ones the general public would wear, okay? And</p> <p>20 we can start with surgical, as she does, and then</p> <p>21 we can go to other forms. And what I'm talking</p> <p>22 about is if you want to determine that, right, you</p> <p>23 could do that.</p> <p>24 In other words, you would take a population</p> <p>25 that doesn't wear a mask, you know, hopefully in</p>	<p style="text-align: right;">Page 108</p> <p>1 the same environment, and try to standardize all</p> <p>2 the other factors, right, and see the infection</p> <p>3 rate. And then you would take, in the same</p> <p>4 environment and other equal size, who faithfully</p> <p>5 wear a mask of whichever variety and you maybe</p> <p>6 study both, okay, each, and you could come up with</p> <p>7 a comparison; right?</p> <p>8 A Those studies have been done.</p> <p>9 Q So what is the --</p> <p>10 A And I do not know the percent difference, but I</p> <p>11 know that universal mask wearing did result in</p> <p>12 decreases in COVID rates in populations that wore</p> <p>13 masks versus populations that did not wear masks.</p> <p>14 Q There was a statistically significant effect.</p> <p>15 A Yes.</p> <p>16 Q Okay. Do you remember the name of the study?</p> <p>17 A I would have to find it for you. I don't. I'm</p> <p>18 sorry.</p> <p>19 Q Okay. Well, I'm not asking you to do that, of</p> <p>20 course, but all right.</p> <p>21 All right. Let's go to page 13, and this is</p> <p>22 at the very end of paragraph 57 where it says</p> <p>23 "Their use" -- and I'm going to ask you what you</p> <p>24 meant by that, okay, what were you referring to --</p> <p>25 "has been thoroughly discredited and discouraged by</p>

<p style="text-align: right;">Page 109</p> <p>1 the CDC and the NIH."</p> <p>2 What is the antecedent to the "their use"?</p> <p>3 Their use of what?</p> <p>4 A So "their" refers to the treatment suggested by</p> <p>5 Dr. McCullough and listed in bold above.</p> <p>6 Q Oh, all of them.</p> <p>7 A Yes. And the reference is for the treatment</p> <p>8 guidelines from the CDC and the NIH.</p> <p>9 Q So all of those have been discredited and</p> <p>10 discouraged?</p> <p>11 A None of those are supported by the CDC or the NIH,</p> <p>12 and the literature base for them is weak.</p> <p>13 Q Okay. Let me show you what's been marked as</p> <p>14 Exhibit 21.</p> <p>15 (Deposition Exhibit 21 marked.)</p> <p>16 Q And I'll represent that I clicked on your link</p> <p>17 here, and this is what popped up, all right, as</p> <p>18 your authority for this statement. "Their use" --</p> <p>19 meaning all of these therapies -- "has been</p> <p>20 thoroughly discredited and discouraged by the CDC."</p> <p>21 Where does it address that in here?</p> <p>22 A Well, you actually haven't printed out the</p> <p>23 guidelines, you've printed out the update to the</p> <p>24 guidelines. There's a larger PDF that goes through</p> <p>25 what the evidence-based criteria are for treatment,</p>	<p style="text-align: right;">Page 110</p> <p>1 the patient characteristics that need to meet those</p> <p>2 criteria, which I delineate in my statement, and</p> <p>3 the drugs that have been approved and not approved</p> <p>4 for the treatment of COVID.</p> <p>5 And what I mean by approved, since only</p> <p>6 remdesivir has an EUA approval, should be used in</p> <p>7 clinical practice based on expert assessment of the</p> <p>8 literature.</p> <p>9 Q So the reference here is not correct.</p> <p>10 A No, the reference takes you to the site where you</p> <p>11 get the PDF. This is just the first thing that</p> <p>12 comes up.</p> <p>13 Q Where is the reference to this PDF you're referring</p> <p>14 to?</p> <p>15 A I'd have to show you on the website. But this is</p> <p>16 just the update to the guidelines; it's not the</p> <p>17 guidelines themselves. And you could also click on</p> <p>18 the link here where it says "full statement" on the</p> <p>19 second page.</p> <p>20 Q Oh, okay.</p> <p>21 A And then the "Panel's statement" on the last page.</p> <p>22 Both of those should link to the same resource,</p> <p>23 which is what they recommend for treatment.</p> <p>24 Q Why didn't you link to those rather than this?</p> <p>25 A It's a PDF as opposed to a website.</p>
<p style="text-align: right;">Page 111</p> <p>1 Q Well, but you can link to PDFs.</p> <p>2 A Oh, I didn't know how to do that.</p> <p>3 Q Oh, okay. Fair enough.</p> <p>4 A I thought that people would be able to get there</p> <p>5 based on the website.</p> <p>6 Q Well, now with that instruction, thank you, but not</p> <p>7 without it. All right.</p> <p>8 MS. RICCHIUTO: Hey, Jim, I think your</p> <p>9 reporter might be interested in a break.</p> <p>10 MR. BOPP: Of course. Let's do that.</p> <p>11 (Recess taken from 3:42 p.m. to 3:52 p.m.)</p> <p>12 Q All right, Doctor, I got ahead of myself. Let's go</p> <p>13 back to 53.</p> <p>14 A Yes.</p> <p>15 Q Now, this paragraph is about people who are</p> <p>16 asymptomatic, who could have COVID and spread</p> <p>17 COVID; is that correct?</p> <p>18 A Correct.</p> <p>19 Q And your authority for that was a Johansson</p> <p>20 article. Let me show you what's been marked as</p> <p>21 Exhibit 20.</p> <p>22 (Deposition Exhibit 20 marked.)</p> <p>23 Q Now, is this the article you're relying upon?</p> <p>24 A Yes.</p> <p>25 Q Now, as I read this article, and correct me if I'm</p>	<p style="text-align: right;">Page 112</p> <p>1 wrong, this is -- the conclusions in this article</p> <p>2 is based on modeling, not empirical studies. Is</p> <p>3 that right?</p> <p>4 A Yeah.</p> <p>5 Q Correct?</p> <p>6 A Correct.</p> <p>7 Q Haven't we discussed modeling, that it really has</p> <p>8 to do with the assumptions you make, not -- are</p> <p>9 there any empirical studies that have demonstrated</p> <p>10 asymptomatic spread of COVID?</p> <p>11 MS. RICCHIUTO: Object to form. Compound.</p> <p>12 MR. BOPP: Yeah, let me just ask the second</p> <p>13 one.</p> <p>14 MS. RICCHIUTO: Okay.</p> <p>15 A Are there any nonmodeling studies that have</p> <p>16 documented asymptomatic spread?</p> <p>17 Q Right.</p> <p>18 A Yes, there's a plethora.</p> <p>19 Q What would that be?</p> <p>20 A There's various studies that have shown that viral</p> <p>21 loads start peaking actually the day before</p> <p>22 symptoms onset, and viral load is correlated to</p> <p>23 infectiousness of the virus.</p> <p>24 There are studies that show that completely</p> <p>25 asymptomatic individuals have been documented to</p>

<p style="text-align: right;">Page 113</p> <p>1 spread to their family. I can also say that</p> <p>2 anecdotally we see very frequently asymptomatic</p> <p>3 spread.</p> <p>4 In addition to that, asymptomatic spread's</p> <p>5 supported by every public health intervention</p> <p>6 across the world that suggests that individuals</p> <p>7 exposed need to be quarantined regardless of</p> <p>8 symptoms because they could spread the infection.</p> <p>9 Q Why do you cite to a model, modeling study rather</p> <p>10 than empirical data?</p> <p>11 A This is the highest percentage that I've seen of</p> <p>12 asymptomatic individuals being infectious. There's</p> <p>13 a wide range here on how infectious -- sorry, what</p> <p>14 percentage of asymptomatic individuals exist that</p> <p>15 are infected and therefore infectious, but this one</p> <p>16 at 30 percent was the highest one. It's a direct</p> <p>17 rebuttal to the low estimate in Dr. McCullough's</p> <p>18 citation.</p> <p>19 Q Are there empirical studies that agree, agree that</p> <p>20 it could be low?</p> <p>21 A I think the vast majority of studies suggest that</p> <p>22 it's over 10 percent. Epidemiologically what we</p> <p>23 see is in alignment with around those rates.</p> <p>24 Q So 10 percent, not 30 percent.</p> <p>25 A Again, in my statement I'm highlighting the range</p>	<p style="text-align: right;">Page 114</p> <p>1 of potential for asymptomatic spread.</p> <p>2 Q Well, you didn't give a low number, so you didn't</p> <p>3 give a range. You just gave a high number; right?</p> <p>4 A But it was to directly rebuttal the low percentage</p> <p>5 that was in Dr. McCullough's statement, so...</p> <p>6 Q So is the generally accepted number 10 percent? Is</p> <p>7 that what you're saying?</p> <p>8 MS. RICCHIUTO: Object to form.</p> <p>9 A No. Generally accepted percentage is around</p> <p>10 30 percent.</p> <p>11 Q Is this percent? The highest number --</p> <p>12 A Yes.</p> <p>13 Q -- in a modeling study?</p> <p>14 A Again, the assumptions in the model are built on</p> <p>15 meta-analysis level data. So they're taking into</p> <p>16 consideration multiple different studies that are</p> <p>17 empirically based. So again, you're right,</p> <p>18 modeling has a number of assumptions and you have</p> <p>19 to, I think, critique those assumptions, but when</p> <p>20 the assumptions are based on meta-analysis real</p> <p>21 world data, I think that model is a lot more robust</p> <p>22 than one that's not.</p> <p>23 Q Then I didn't understand your reference to the</p> <p>24 10 percent. That was what the empirical studies</p> <p>25 have shown, approximately.</p>
<p style="text-align: right;">Page 115</p> <p>1 A In general.</p> <p>2 Q In general?</p> <p>3 A In general, the composite studies are anywhere</p> <p>4 between 10 percent and, you know, even as high as</p> <p>5 40, 50 percent, but most of them, I would say, are</p> <p>6 over 10 percent. And when you build a model off of</p> <p>7 all of those empirical studies, it shows up around</p> <p>8 30 percent. And that's around what most people</p> <p>9 will cite as the asymptomatic fraction with this</p> <p>10 infection.</p> <p>11 Q Well, what have we learned since January 7, 2021?</p> <p>12 Has there been empirical studies since then on the</p> <p>13 amount of asymptomatic spread?</p> <p>14 A Certainly there has, but I'm not aware of any large</p> <p>15 ones that have -- that I could cite for you.</p> <p>16 Q Page 15, paragraph 63, this says there's no</p> <p>17 evidence -- now you'll have to tell me what all</p> <p>18 these words mean, okay, or at least some of them.</p> <p>19 Genotoxicity?</p> <p>20 A So this list was taken directly from</p> <p>21 Dr. McCullough's statement. Genotoxicity is damage</p> <p>22 to genetic materials. Mutagenicity is essentially</p> <p>23 the same thing but it's essentially a stressor on</p> <p>24 the genetics that creates mutations.</p> <p>25 Teratogenicity specifically is mutations of a fetus</p>	<p style="text-align: right;">Page 116</p> <p>1 during delivery. And oncogenicity are mutations</p> <p>2 that lead to immortalization of cells, namely</p> <p>3 cancer.</p> <p>4 Q Isn't the reason there's no evidence of these</p> <p>5 effects, because they weren't studied?</p> <p>6 MS. RICCHIUTO: Object to form.</p> <p>7 A All complications were studied in these areas. And</p> <p>8 I think any concern we have about vaccines has to</p> <p>9 come down to biologic plausibility, which is I why</p> <p>10 I went into depth, I think in my next statement,</p> <p>11 statement 64, about how RNA relates to the rest of</p> <p>12 the cellular machinery.</p> <p>13 I mean, we can make a lot of hypotheses about</p> <p>14 vaccines doing XYZ, but whether or not they should</p> <p>15 be tested should be based on generation of</p> <p>16 plausible hypotheses; otherwise, you could make up</p> <p>17 infinite questions. But based on our knowledge of</p> <p>18 the science, the chances of RNA that is being</p> <p>19 imported into the cell creating any sort of damage</p> <p>20 to DNA, or the intrinsic code, which is separated</p> <p>21 by a double membrane, is such a low probability</p> <p>22 that anyone doing any sort of vaccinology research</p> <p>23 isn't going to pursue this. It's not --</p> <p>24 Q Okay. So --</p> <p>25 A -- viable.</p>

Page 117

1 Q So you're justifying why it's not pursued, and my
2 simple question was it wasn't pursued, that they
3 did not specifically study for these items.
4 MS. RICCHIUTO: Object to form.
5 A So yes, you're right. Did they do an
6 individualized trial that looked at whether or not
7 the genes were damaged? No, they didn't. But they
8 also didn't do individualized trials to look at if
9 patients with lyme disease were at higher risk or
10 if patients with, you know, multiple sclerosis had
11 increased risk of outcomes.
12 But that's the point of large Phase III
13 randomized controlled trials, is that the point of
14 randomization is you account for all of these, you
15 watch it over time, and you see if there's a
16 difference between groups who got vaccine or not
17 vaccine.
18 So was this a direct aim? No. But they
19 account for this in study design by applying
20 placebo and applying randomization to the groups.
21 Q Let's go to 66. No, let's -- okay. I meant 67,
22 I'm sorry. Do we know the rate of -- and I wish I
23 could pronounce it -- myocarditis currently in the
24 age 12 to 39 male? Do we know?
25 MS. RICCHIUTO: Object to form.

Page 119

1 Q I just read that statement.
2 A You're on 69?
3 Q It's the second line at the end of the line.
4 A Oh. I gotcha.
5 Q And there is --
6 A Gotcha.
7 Q Okay? And there is no proof. How do you judge
8 causation?
9 A Yeah. I think this is extremely difficult area in
10 order to be able to define. I think it needs
11 robust large quality data, a biological
12 plausibility, and, you know, molecular biochemical
13 evidence to suggest that there's a pathway in which
14 this makes sense.
15 Q What do researchers use to measure causality?
16 A What do they use to measure causality?
17 Q Yes.
18 A So causality is a statement that you can make about
19 the burden of evidence that's available.
20 Q Well, what criteria would they use to determine if
21 there's causality?
22 A I just talked through it, I think. So there needs
23 to be biologic plausibility. There needs to be
24 molecular basis for it. There needs to be large
25 data that associates -- that creates a strong

Page 118

1 A We should be able to find that. I'm not aware of
2 those numbers. The limitations there,
3 unfortunately, are going to be reporting.
4 Q Well, and we're not testing for it, right, either?
5 I mean, we're not surveying every male that has
6 been vaccinated to find out if they have this.
7 A Right.
8 Q We have to rely on self-reporting.
9 A Right.
10 Q And as I understand it, that went through the VAERS
11 system?
12 A Yes. Vaccine event reporting, yeah.
13 Q And isn't it true that the estimate is 10 percent
14 reporting per, you know, for whatever have been
15 reported, that the reporting rate, because it's a
16 passive system, is about 10 percent?
17 A I don't know that. I would expect a wide range in
18 possibilities there.
19 Q But, you know, 10 percent is perfectly plausible;
20 right? It's only 10 percent?
21 A I don't know.
22 MS. RICCHIUTO: Object to form.
23 Q 69. The second line at the end, "there is no proof
24 of causation between vaccination and myocarditis."
25 A Sorry.

Page 120

1 association between the disease processes.
2 Q Are you familiar with the Hill's criteria for
3 causality?
4 A That sounds familiar.
5 Q I mean, are you?
6 A Yes, sounds familiar. I have heard the name Hill's
7 criteria. Could I recite it to you right now?
8 Probably not.
9 Q Did you use the Hill's criteria to make this
10 statement that there's no proof of causality?
11 A No proof of causality has been cited in any of the
12 literature to date. The association has been
13 cited.
14 Q Yes. But I'm asking you about your statement. You
15 said --
16 A I did not apply Hill's criteria. I used expert
17 opinion.
18 Q Okay. So you have no opinion on that other than
19 what maybe the CDC said?
20 A No, I'm very willing to acknowledge that it may be
21 causal. However, I think right now, based on
22 everything that I've seen, is that we have an
23 association, and have to be very cautious with
24 association until those criteria have been met.
25 At this point, to me, I think that it's still

<p style="text-align: right;">Page 121</p> <p>1 such small numbers, in order to be able to pull out</p> <p>2 causality by whatever criteria you want to use is</p> <p>3 probably going to be difficult to do.</p> <p>4 Q By the way, did we change -- did they change death</p> <p>5 reporting with respect to COVID-19 from, I forget</p> <p>6 now the exact, the word, from because of or due to,</p> <p>7 I forget what it was, to with, from or with? I</p> <p>8 think that was the change.</p> <p>9 MS. RICCHIUTO: Foundation.</p> <p>10 A Yeah, I don't know the exact answer for it, and I</p> <p>11 think that that question was handled different by</p> <p>12 different groups. So I don't know where it landed.</p> <p>13 Q Because if you die with COVID, that doesn't mean</p> <p>14 it's caused by it.</p> <p>15 A I don't think we know that for sure. In theory,</p> <p>16 that's possible. But I think we're still learning</p> <p>17 about the associations with COVID.</p> <p>18 That's why there's this huge political debate</p> <p>19 about this, in my opinion, is that there's still a</p> <p>20 lot of uncertainty related to people dying with</p> <p>21 COVID versus of COVID, because we don't know the</p> <p>22 extent to which the virus actually affects other</p> <p>23 organ systems and might throw things out of whack.</p> <p>24 Q But if we don't know, then what's the justification</p> <p>25 for claiming it? If you don't know the effect of</p>	<p style="text-align: right;">Page 122</p> <p>1 the COVID virus on death, what's the justification</p> <p>2 for claiming that it was a COVID death, if you</p> <p>3 don't know?</p> <p>4 A I think there's very clear cases where COVID leads</p> <p>5 to ultimate demise.</p> <p>6 Q I know, but you were just talking about when we</p> <p>7 don't know. That's what you were just talking</p> <p>8 about. When we don't know.</p> <p>9 A Sure.</p> <p>10 Q But those are being claimed that. What's the</p> <p>11 justification for that?</p> <p>12 A I didn't make any justification there. I think to</p> <p>13 me it's helpful to know both.</p> <p>14 Q Sure.</p> <p>15 A It would be nice to know which the provider thinks,</p> <p>16 because, right, this is all coming from, I'm</p> <p>17 assuming from death records. I would like to know</p> <p>18 how much deaths were from patients who were COVID</p> <p>19 positive. I'd also want to know how many of those</p> <p>20 deaths were where the provider assessed that the</p> <p>21 COVID was not associated with their ultimate</p> <p>22 demise. And it's probably going to be somewhere in</p> <p>23 the middle, would be my guess, so I would like to</p> <p>24 know the gradient.</p> <p>25 I don't think there's a huge difference in</p>
<p style="text-align: right;">Page 123</p> <p>1 those numbers, to be honest with you, when I've</p> <p>2 looked at them historically. But, in general, I</p> <p>3 think that any sort of data gradient that we can</p> <p>4 get there, or range that we can get there, is</p> <p>5 probably helpful in the ultimate analysis.</p> <p>6 Q Oh, let me just mark Exhibit 22.</p> <p>7 (Deposition Exhibit 22 marked.)</p> <p>8 Q This is, for your information, Hill's Criteria for</p> <p>9 Causality, which --</p> <p>10 A Take another look at this. Thanks.</p> <p>11 Q -- I'm advised is the gold standard for trying to</p> <p>12 figure out causality, but you may enjoy reading</p> <p>13 that.</p> <p>14 A Yeah, I think I mentioned a lot of these things.</p> <p>15 Q There you go.</p> <p>16 A Sounds familiar, that I just said it.</p> <p>17 Q Some of them, uh-huh. All right.</p> <p>18 Let me show you what's been marked as</p> <p>19 Exhibit 23.</p> <p>20 (Deposition Exhibit 23 marked.)</p> <p>21 Q Are you familiar with this study?</p> <p>22 A Yes, I've seen this before.</p> <p>23 Q Okay. It purports to measure COVID vaccine death</p> <p>24 reports from the VAERS system database, so it</p> <p>25 analyzed that data up to April 2021, as I</p>	<p style="text-align: right;">Page 124</p> <p>1 understand it.</p> <p>2 A Yep.</p> <p>3 Q Is this reliable, do you think?</p> <p>4 A It's a reliable study looking at an unreliable</p> <p>5 system. I do not think that the VAERS system is</p> <p>6 reliable.</p> <p>7 Q Okay. In what way is it not reliable?</p> <p>8 A It's a passive reporting system from lay</p> <p>9 individuals. So if someone got hit by a car and</p> <p>10 they recently had a COVID vaccine, that would hit</p> <p>11 the system if it was reported.</p> <p>12 Q Are you aware that most of the reporting is done by</p> <p>13 healthcare providers?</p> <p>14 A Even in that situation, it's still passive</p> <p>15 reporting. It's not validated through studies.</p> <p>16 Q True. But it's not done by laymen. It's done by</p> <p>17 healthcare providers.</p> <p>18 A Some are done by healthcare providers but a large</p> <p>19 percentage are done by -- not large percentage but</p> <p>20 a percentage -- anyone can report to VAERS.</p> <p>21 Q So in analyzing the situation for IU's</p> <p>22 determination that they're going to impose a COVID</p> <p>23 vaccine mandate on students, did they consult the</p> <p>24 VAERS system and the information available there?</p> <p>25 A I would never recommend consulting the VAERS system</p>

<p style="text-align: right;">Page 125</p> <p>1 since it's unconfirmed data.</p> <p>2 Q I know. But did they?</p> <p>3 A Did which group consult?</p> <p>4 Q The committee that made the recommendation.</p> <p>5 A So you're asking about what the deliberations were</p> <p>6 and the discussion to make the vaccine mandate.</p> <p>7 Q No, I'm asking about the data that was consulted.</p> <p>8 A We looked at all relevant data to make the decision</p> <p>9 on the vaccine mandate.</p> <p>10 Q Is VAERS information relevant?</p> <p>11 A I do not any think that the VAERS information is</p> <p>12 relevant. As to whether or not anyone on the</p> <p>13 committee looked at this, I can't speak to that. I</p> <p>14 don't know what they looked at. There was a group</p> <p>15 discussion amongst professionals.</p> <p>16 The issue with this VAERS data, if I may, is</p> <p>17 there would have to be some sort of explanation on</p> <p>18 why we weren't seeing that in the trials, why we</p> <p>19 weren't seeing that same mortality rate in the</p> <p>20 trials. There's a huge difference between the</p> <p>21 percentages associated with the study and what</p> <p>22 we're actually doing when we're watching the</p> <p>23 patients in a systematic controlled fashion.</p> <p>24 Q Turn to page 18, paragraph 71. You make a rather</p> <p>25 categorical statement here, if I may, saying "There</p>	<p style="text-align: right;">Page 126</p> <p>1 is no strong data for or against vaccination after</p> <p>2 natural infection." Do you still stand by that</p> <p>3 statement?</p> <p>4 A To my knowledge, there has not -- since I put this</p> <p>5 together, there has not been any other literature</p> <p>6 that's come to my attention that has refuted that,</p> <p>7 so I still stand by that.</p> <p>8 Q As I understand it, IU requires students that have</p> <p>9 had COVID infection to get vaccinated; correct?</p> <p>10 A That is correct.</p> <p>11 Q And you acknowledge that there is no strong data</p> <p>12 for that requirement.</p> <p>13 A I think that there's the data that suggests that</p> <p>14 it's beneficial, but as far as that population, so</p> <p>15 a population that has had COVID and then gets the</p> <p>16 vaccine, I don't think there's really strong data</p> <p>17 that says, yet, that the vaccine adds extra</p> <p>18 benefit.</p> <p>19 There is data that I think is very supportive</p> <p>20 that I highlighted earlier that we previously</p> <p>21 talked about related to the breadth of the immune</p> <p>22 response in the vaccine versus natural infection as</p> <p>23 well as the antibody levels in vaccine versus</p> <p>24 natural infection.</p> <p>25 I personally feel like that is adequate data</p>
<p style="text-align: right;">Page 127</p> <p>1 with very, very low risk of harm, to suggest that</p> <p>2 the bigger immune response you can get from this is</p> <p>3 better.</p> <p>4 We also talked about previously how if you get</p> <p>5 infected, that's essentially just another booster</p> <p>6 you're getting, and more boosters is probably</p> <p>7 better, for any sort of infection, and in</p> <p>8 particular for COVID, and we know that from looking</p> <p>9 at people who don't mount a strong response to</p> <p>10 start out with.</p> <p>11 Q But you're still adherent to this statement; right?</p> <p>12 A Yeah. I think what I would really like to see in</p> <p>13 order to say that there's strong data for -- I</p> <p>14 don't think there would be strong data against, but</p> <p>15 what I would expect to see for strong data for</p> <p>16 would be evidence of improved immune, either</p> <p>17 duration or breadth of coverage when you look</p> <p>18 specifically at immunized patients, infected and</p> <p>19 immunized patients in real world.</p> <p>20 Q Also on page 18, No. 73, with all due respect, you</p> <p>21 use some very vague, you know, equivocal words</p> <p>22 here.</p> <p>23 A Okay.</p> <p>24 Q Entirely possible, may be, et cetera. This</p> <p>25 reflects what you were just saying, is there's no</p>	<p style="text-align: right;">Page 128</p> <p>1 strong evidence either way.</p> <p>2 A There's just uncertain --</p> <p>3 MS. RICCHIUTO: Object to form.</p> <p>4 A It's just uncertain in the medical literature right</p> <p>5 now.</p> <p>6 Q I think we already looked at the Raw's, Rachael</p> <p>7 Raw's paper.</p> <p>8 A I don't think we've discussed it.</p> <p>9 Q Oh, okay.</p> <p>10 A Oh, we have. No, sorry. Was this the same one?</p> <p>11 Are you talking about the one that I'm referencing</p> <p>12 in 74?</p> <p>13 Q Yes. Of course I don't see a cite to that.</p> <p>14 A Yeah, yeah, yeah. Because McCullough referenced</p> <p>15 it.</p> <p>16 Q Right.</p> <p>17 A It was his reference.</p> <p>18 Q So we've already --</p> <p>19 A You're right. This is the same, yeah.</p> <p>20 Q Okay. I thought it was.</p> <p>21 MS. RICCHIUTO: For the record, that's 17.</p> <p>22 MR. BOPP: Thank you.</p> <p>23 Q All right. 77. "Using a serologic test to equate</p> <p>24 to immunity is not evidence-based and not</p> <p>25 recommended by the CDC." You stand by that</p>

<p style="text-align: right;">Page 129</p> <p>1 statement?</p> <p>2 A I do.</p> <p>3 Q All right. You cite this article of the CDC. Let</p> <p>4 me show you what's been marked as Exhibit 31.</p> <p>5 (Deposition Exhibit 31 marked.)</p> <p>6 Q And the way I read this CDC recommendation is that,</p> <p>7 that antibody test may not show if you have a</p> <p>8 current infection.</p> <p>9 A Correct.</p> <p>10 Q Well, your statement is way broader than that.</p> <p>11 A What do you mean? So to --</p> <p>12 Q Because of what they're saying is you need to wait</p> <p>13 a week or two, or week to three, okay, before</p> <p>14 antibodies are developed, and then you take the</p> <p>15 test, and it will be valid; correct?</p> <p>16 A So what -- incorrect. So what the CDC is referring</p> <p>17 to, and they delineate this further, is that</p> <p>18 there's high-risk for false-positives and</p> <p>19 false-negatives. And that's the main problem with</p> <p>20 antibody and why it's not clinically super helpful</p> <p>21 outside of very specific situations.</p> <p>22 The CDC recommends antibody testing in two</p> <p>23 scenarios, where you have a very high pretest</p> <p>24 probability of it being COVID, but you have</p> <p>25 negative PCR serially.</p>	<p style="text-align: right;">Page 130</p> <p>1 (Discussion held off the record.)</p> <p>2 So the CDC recommends antibody testing, which</p> <p>3 is serology, in two clinical situations. One is if</p> <p>4 you have a high pretest probability for</p> <p>5 coronavirus, but you've had two serial PCRs, which</p> <p>6 is the gold standard for diagnosis, that are</p> <p>7 negative.</p> <p>8 So it's a way of trying to get a positive to</p> <p>9 decide if someone needs treatment. Because your</p> <p>10 pretest probability is so high, even as</p> <p>11 problematic, potentially, false-positive test has</p> <p>12 higher positive likelihood ratio, or higher post</p> <p>13 test probability if it's positive.</p> <p>14 The other situation is with multisystem</p> <p>15 inflammatory disease in children, which is because,</p> <p>16 again, the syndrome, just by questioning the</p> <p>17 syndrome, leads to a high pretest probability. So</p> <p>18 you had someone with previous COVID infection and</p> <p>19 you have a syndrome that fits with this</p> <p>20 inflammatory syndrome, the positive tests is more</p> <p>21 reliable in those situations because of your</p> <p>22 pretest probability.</p> <p>23 The problem is in the general public right</p> <p>24 now, there's -- there's so much variation between</p> <p>25 the antibody platforms that false-negatives and</p>
<p style="text-align: right;">Page 131</p> <p>1 false-positives occur to the extent that if you are</p> <p>2 negative, I couldn't really tell you for sure if</p> <p>3 you are actually never -- if you are actually COVID</p> <p>4 immune.</p> <p>5 If you are positive, I also couldn't really</p> <p>6 tell you with good reliability that you actually</p> <p>7 saw COVID and not another maybe seasonal</p> <p>8 coronavirus that created false reactivity.</p> <p>9 So that's what's led to hesitancy from the</p> <p>10 CDC's perspective, is using this as a primary</p> <p>11 diagnostic. Otherwise it's much easier to use than</p> <p>12 a nasopharyngeal PCR. It's a pain to get the</p> <p>13 nasopharyngeal PCR. So if we could use this as a</p> <p>14 diagnostic, even as a delayed perspective, we would</p> <p>15 have a really good assessment of what our true</p> <p>16 population protection was.</p> <p>17 Q What are the false-positives with current testing</p> <p>18 that IU is mandating?</p> <p>19 A For PCRs?</p> <p>20 Q To determine whether or not you have COVID.</p> <p>21 A Oh.</p> <p>22 Q The testing that is being required for people that</p> <p>23 get an exemption, or mitigation testing, what is</p> <p>24 the false-positives for that?</p> <p>25 A Gotcha. So we're talking about the PCR testing</p>	<p style="text-align: right;">Page 132</p> <p>1 that we're using for diagnosis.</p> <p>2 Q Right.</p> <p>3 A We cannot comment on a false-positive rate because</p> <p>4 we don't have a true positive. We don't have a</p> <p>5 gold standard. And that's a problem with PCRs in</p> <p>6 general, and with COVID diagnostics in general, is</p> <p>7 there's not a true gold standard for diagnosis, so</p> <p>8 we're forced to use the most sensitive test, which</p> <p>9 is the PCR, with the knowledge that some of these</p> <p>10 could be false-positives.</p> <p>11 That's a problem that we've had in the past</p> <p>12 with PCR tests in general, is that it picks up a</p> <p>13 little bit of DNA, or RNA in this case; it</p> <p>14 amplifies it to make it seem like you've got a</p> <p>15 positive, but there's really not a whole lot of</p> <p>16 virus around, or it might not even be infectious</p> <p>17 virus.</p> <p>18 Q What's the rate of false-positives?</p> <p>19 A We don't know even in the literature because</p> <p>20 there's no gold standard for the diagnosis of</p> <p>21 COVID. I can't comment on --</p> <p>22 Q Well, do you have a range? Are they estimating a</p> <p>23 range?</p> <p>24 A You can't get -- you cannot get false-positives and</p> <p>25 false-negatives unless you have a true gold</p>

<p style="text-align: right;">Page 133</p> <p>1 standard. So a lot of these serologic tests are</p> <p>2 being compared to PCR. And that's the functional</p> <p>3 gold standard right now, but we don't know what the</p> <p>4 actual true best test is for infectivity. Is it</p> <p>5 viral culture? Is it viral antigen? Is it PCR?</p> <p>6 We just don't know.</p> <p>7 And in the setting of a pandemic, we want to</p> <p>8 use the most sensitive test and act on the most</p> <p>9 sensitive test because we would rather over isolate</p> <p>10 and over quarantine as opposed to under doing it in</p> <p>11 order to curb the spread.</p> <p>12 Q On page 19, paragraph 79, there's -- are you</p> <p>13 familiar with a report that -- as to the VAERS</p> <p>14 system that 83 percent of the reporting persons are</p> <p>15 either doctors or nurses?</p> <p>16 MS. RICCHIUTO: Object to foundation.</p> <p>17 A No.</p> <p>18 Q Page 20, 83, please.</p> <p>19 A Uh-huh.</p> <p>20 Q Who is the British health regulator that you're</p> <p>21 referring to?</p> <p>22 A I don't know his name, but the concern from</p> <p>23 Dr. McCullough's declaration in paragraph 48</p> <p>24 brought up a statement from the UK that seemed to</p> <p>25 imply that even the UK government or</p>	<p style="text-align: right;">Page 134</p> <p>1 representatives of the UK government felt like the</p> <p>2 side effects of the vaccine made it nonsafe, but</p> <p>3 it's been reviewed by their appropriate governing</p> <p>4 agencies and decided that it's still beneficial to</p> <p>5 give the vaccine.</p> <p>6 So I'm not sure what position the British</p> <p>7 health regulator serves in the UK, but they are</p> <p>8 still vaccinating there despite his concern in 48.</p> <p>9 Q Now, of course there's a name at the end of your</p> <p>10 citation here, who is --</p> <p>11 A Tess Lawrie was the individual that brought up that</p> <p>12 concern that said these vaccines have too many side</p> <p>13 effects and are unsafe. Her concern was reviewed</p> <p>14 and they've continued to vaccinate in the UK.</p> <p>15 Q Let me show you what's been marked as Exhibit 33.</p> <p>16 (Deposition Exhibit 33 marked.)</p> <p>17 Q Is that the report you're referring to?</p> <p>18 A Yes. This looks familiar.</p> <p>19 Q By Lawrie that is referred to in paragraph 83?</p> <p>20 A Yeah, I believe so.</p> <p>21 Q Okay. Now, go to paragraph 84.</p> <p>22 A My paragraph 84?</p> <p>23 Q Yes, please. They're doing two forms of testing.</p> <p>24 Well, maybe more, actually. Probably three.</p> <p>25 Randomized mitigation testing; is that correct?</p>
<p style="text-align: right;">Page 135</p> <p>1 A So it might help to hear the rest of the list,</p> <p>2 because this is in flux on what we're going to end</p> <p>3 up doing. That's probably changing on how much</p> <p>4 testing and what type of testing we're going to be</p> <p>5 doing.</p> <p>6 Q The three that I understood: Mitigation testing,</p> <p>7 which is randomized.</p> <p>8 A Yeah.</p> <p>9 Q Testing of people that are symptomatic.</p> <p>10 A Correct.</p> <p>11 Q Which you're in charge of.</p> <p>12 A That's my jurisdiction. Yeah, yeah, yeah.</p> <p>13 Q And then twice-a-week testing of anyone that gets</p> <p>14 an exemption, either the medical or the religious</p> <p>15 exemption.</p> <p>16 A So --</p> <p>17 Q And I don't know what to call that.</p> <p>18 A We're calling that, that's the mitigation testing</p> <p>19 aspect, which is twice per week for those who have</p> <p>20 not submitted to vaccine -- or sorry. Who have --</p> <p>21 are not vaccinated.</p> <p>22 Q Right. Right.</p> <p>23 A And then there's surveillance testing, which is</p> <p>24 still under debate, to be honest with you, but it's</p> <p>25 testing of the general population that has been</p>	<p style="text-align: right;">Page 136</p> <p>1 vaccinated, randomized, to see if we're seeing</p> <p>2 breakthrough, and that's optional.</p> <p>3 And then there's symptomatic testing, you're</p> <p>4 correct. Those are the three strategies.</p> <p>5 Q Okay. Now, what -- are the results of those tests,</p> <p>6 and I don't mean identifying individual students,</p> <p>7 but I mean the results of the tests accumulated,</p> <p>8 are they going to be shared with anyone like the</p> <p>9 researchers, the CDC, whatever?</p> <p>10 A The only intent of those numbers are for public</p> <p>11 health purposes.</p> <p>12 Q I understand that, but that's not what I was asking</p> <p>13 you. I was asking you who outside of -- who is</p> <p>14 going to receive access to that information?</p> <p>15 MS. RICCHIUTO: Objection. Lack of</p> <p>16 foundation.</p> <p>17 A Only the individuals that need that data for public</p> <p>18 health purposes.</p> <p>19 Q Well, that could be a million people all over the</p> <p>20 world.</p> <p>21 A Right. We aren't consenting students for use of</p> <p>22 their numbers or their data results. We have no</p> <p>23 plan on publishing or submitting their data to</p> <p>24 researchers.</p> <p>25 Q Who are you referring to when you say to public</p>

<p style="text-align: right;">Page 137</p> <p>1 health people? Who are you referring to?</p> <p>2 A The medical response team. The people who are</p> <p>3 doing the contact tracing. So all the positives</p> <p>4 have to be reviewed by people to say, hey, there's</p> <p>5 an outbreak at the dorm. The people who need to be</p> <p>6 able to respond to the outbreak on the dorm need to</p> <p>7 know the numbers.</p> <p>8 Q All right. That's good. Who else?</p> <p>9 A Leadership, to see just global what the numbers</p> <p>10 are.</p> <p>11 Q But that's not for anybody at IU or any other place</p> <p>12 for research purposes.</p> <p>13 A Not -- no. I mean, that's not -- you know, they</p> <p>14 would have to go through a separate IRB. They</p> <p>15 would have to go through a complete separate</p> <p>16 process in order to obtain that data.</p> <p>17 Q I'm just asking whether you are doing that.</p> <p>18 A We are absolutely not doing that. We've had that</p> <p>19 data for the last year and haven't done anything of</p> <p>20 the sort.</p> <p>21 Q Okay. 85. Your second sentence there was really</p> <p>22 curious to me. While the WHO recommended that</p> <p>23 vaccinating children was less urgent than adults,</p> <p>24 they still recommend the vaccination.</p> <p>25 A This was in response to a very specific comment.</p>	<p style="text-align: right;">Page 138</p> <p>1 MS. RICCHIUTO: Do you have a question?</p> <p>2 Q Yeah. What did you mean by that?</p> <p>3 A This was in response --</p> <p>4 MR. BOPP: Obviously he understood.</p> <p>5 A This is in response to a very specific comment from</p> <p>6 Dr. McCullough that said that the WHO said that</p> <p>7 children shouldn't be vaccinated. That's actually</p> <p>8 not accurate. The WHO said that if we have to</p> <p>9 prioritize vaccination, we need to prioritize</p> <p>10 vaccination -- if we have a limited supply of</p> <p>11 vaccine, we need to prioritize those who are at</p> <p>12 higher risk for bad outcome, which children are not</p> <p>13 the highest risk.</p> <p>14 So if there needs to be a triage strategy,</p> <p>15 that triage strategy should start with a whole list</p> <p>16 of lower, but it didn't say not to vaccinate</p> <p>17 children or those who were available to get the</p> <p>18 vaccine, so that would be 12 and up at this point.</p> <p>19 What they said was that if there's limited</p> <p>20 resources, then we should focus on those that are</p> <p>21 highest risk first.</p> <p>22 Q I was also curious what you said, that they're not</p> <p>23 at the highest risk, children are not the highest</p> <p>24 risk. A more accurate statement, wouldn't it be,</p> <p>25 that they are at the least risk?</p>
<p style="text-align: right;">Page 139</p> <p>1 MS. RICCHIUTO: Object to form.</p> <p>2 A I think we have to define children first, and I</p> <p>3 think we have to decide what the risk is. So it's</p> <p>4 just --</p> <p>5 Q Well, in relationship to older people, which is the</p> <p>6 way you were describing it, it's astronomically</p> <p>7 different; right? It's like 600 times more</p> <p>8 riskful.</p> <p>9 A I totally agree with what we had talked about</p> <p>10 before, where, as it relates to mortality,</p> <p>11 adolescents, college-age groups are at a much lower</p> <p>12 risk than older individuals. I think they're</p> <p>13 probably at higher risk than individuals who are</p> <p>14 younger than a college-age group.</p> <p>15 Q Slightly? Yes, agree with that.</p> <p>16 A And probably even a higher risk than those who are</p> <p>17 younger than a grade school age group, so children.</p> <p>18 Not children, but babies. So I don't think they're</p> <p>19 the lowest risk. I think they are very low risk</p> <p>20 though.</p> <p>21 Q Okay. Let's go to your Conclusion, 87. In the</p> <p>22 second line, you're referring to "among our</p> <p>23 students and our communities." What are you</p> <p>24 referring to when you say community?</p> <p>25 A I would say the area in which the education occurs.</p>	<p style="text-align: right;">Page 140</p> <p>1 So that's going to include faculty and staff,</p> <p>2 that's going to include the county that comes in,</p> <p>3 that's going to include the contractors that come</p> <p>4 in that aren't IU constituents. Anyone that</p> <p>5 potentially interfaces with our students or our</p> <p>6 constituents.</p> <p>7 Q So people in Bloomington. People who live in</p> <p>8 Bloomington, work in Bloomington.</p> <p>9 MS. RICCHIUTO: Objection. Misstates the</p> <p>10 testimony.</p> <p>11 Q Is that part of the community you're referring to?</p> <p>12 A I would say that anyone who comes into contact with</p> <p>13 our students. So that would include the people who</p> <p>14 live in Bloomington that come in contact with our</p> <p>15 students.</p> <p>16 Q And there's a lot of those. I went to school</p> <p>17 there; I came in a lot of contact, you know.</p> <p>18 So don't you think a more effective strategy</p> <p>19 for protecting people in the Bloomington community</p> <p>20 as opposed to -- would be that they be required to</p> <p>21 be vaccinated? Because you would, number one, get</p> <p>22 older people that have an astronomically higher</p> <p>23 risk of adverse effects by COVID infection, and</p> <p>24 they would get more benefit from it as a result.</p> <p>25 Isn't that -- if you were thinking about a public</p>

<p style="text-align: right;">Page 141</p> <p>1 health strategy for Monroe County, isn't the safest</p> <p>2 and the most effective would be to require the</p> <p>3 residents of Bloomington or Monroe County to be --</p> <p>4 require them to be vaccinated, not IU students?</p> <p>5 MS. RICCHIUTO: Object to form. Compound.</p> <p>6 Calls for speculation.</p> <p>7 A To me, I want as many people to be vaccinated as</p> <p>8 possible, but I can only influence policy where I</p> <p>9 have control of influencing policy, which is</p> <p>10 advising the IU leadership.</p> <p>11 The effect to the community, honestly, is</p> <p>12 secondary to the -- sorry. The benefit to the</p> <p>13 community is secondary to the benefit that we</p> <p>14 perceive of being the entire IU constituent</p> <p>15 population.</p> <p>16 And even though the individual risk to an</p> <p>17 average college-age student is low, we have a</p> <p>18 community that we need to serve, and providing a</p> <p>19 herd immunity threshold and still allowing people</p> <p>20 to get back to classes and, you know, get in-person</p> <p>21 learning, get into laboratories safely, requires a</p> <p>22 protective bubble to be around those individuals,</p> <p>23 whatever the number is, that can't mount the</p> <p>24 effective immune response.</p> <p>25 So, unfortunately, if it were 100 percent up</p>	<p style="text-align: right;">Page 142</p> <p>1 to me, I would advise every single individual to</p> <p>2 get the COVID vaccine if they did not have an</p> <p>3 exemption that -- or a contraindication that was</p> <p>4 listed by the CDC or has been proven by the data.</p> <p>5 At this point, though, the only control that</p> <p>6 we have over the system as medical advisors is for</p> <p>7 advising those who set policy for the school.</p> <p>8 Q All right. Well, thank you. Oh, wait, wait, wait.</p> <p>9 One other thing here. Make our record complete.</p> <p>10 Let me show you what's been marked as</p> <p>11 Exhibit 9.</p> <p>12 (Deposition Exhibit 9 marked.)</p> <p>13 Q Is this the McCullough report that you were asked</p> <p>14 to write a report to refute?</p> <p>15 A Yes.</p> <p>16 Q Go to page 4, his curriculum vitae. Let me show</p> <p>17 you what's been marked as Exhibit 10.</p> <p>18 (Deposition Exhibit 10 marked.)</p> <p>19 Q Have you reviewed his curriculum vitae,</p> <p>20 Dr. McCullough's?</p> <p>21 A I perused his very large curriculum vitae.</p> <p>22 Q It is large. And now look at paragraph 11.</p> <p>23 A On his curriculum -- oh.</p> <p>24 Q No, on page 4 of his report, No. 11.</p> <p>25 A Got it.</p>
<p style="text-align: right;">Page 143</p> <p>1 Q Okay. Have you read that paragraph?</p> <p>2 A I'll read it now. Yep.</p> <p>3 Q Do you have any doubt that he is an expert on</p> <p>4 COVID-19 virus and its treatment?</p> <p>5 MS. RICCHIUTO: Object to the extent it calls</p> <p>6 for a legal conclusion.</p> <p>7 A I have serious doubt.</p> <p>8 Q You do?</p> <p>9 A Yeah.</p> <p>10 Q Are you aware that he has published the leading</p> <p>11 study in the world on the treatment of COVID-19?</p> <p>12 MS. RICCHIUTO: Object to foundation.</p> <p>13 A I would have to review that study, but based on his</p> <p>14 testimony here recommending evidence that isn't</p> <p>15 actually evaluated or suggested by our governing</p> <p>16 epidemic control agency, the CDC, I'd have major</p> <p>17 doubts related to that being the leading study in</p> <p>18 the world. Anyone who is recommending</p> <p>19 hydroxychloroquine at this point has their finger</p> <p>20 way off the pulse.</p> <p>21 Q I thought you testified earlier that you just don't</p> <p>22 accept whatever the CDC says. In fact, you have</p> <p>23 critiqued what they say because you looked at the</p> <p>24 underlying data.</p> <p>25 A Right. And in regards to the hydroxychloroquine,</p>	<p style="text-align: right;">Page 144</p> <p>1 all of their statements are backed by data that is</p> <p>2 well done, high quality. And I think the treatment</p> <p>3 algorithms, not only have I arrived at independent</p> <p>4 conclusions about that, but the consensus medical</p> <p>5 opinion has arrived at common conclusions.</p> <p>6 Q Do you think you're more of an expert than he is?</p> <p>7 MS. RICCHIUTO: Object to form. Foundation.</p> <p>8 A I think my self-assessment didn't come into this at</p> <p>9 all. I think that everything needs to come back to</p> <p>10 the data. My personal assessment of the data is</p> <p>11 what my statement is based off of.</p> <p>12 I have not met Dr. McCullough, I haven't had a</p> <p>13 chance to discuss these issues with him, but based</p> <p>14 on his statement I think there's enough</p> <p>15 inconsistencies with the medical literature to</p> <p>16 suggest that he does not have a good grasp on what</p> <p>17 the current approach to treatment of COVID or the</p> <p>18 pathophysiology and epidemiology of the virus</p> <p>19 actually is.</p> <p>20 I acknowledge he has more publications, but I</p> <p>21 was not able to publish as much as I would have</p> <p>22 liked to during the COVID pandemic because I was</p> <p>23 busy treating COVID patients, working through</p> <p>24 policy with the hospital, taking care of sick</p> <p>25 people.</p>

<p style="text-align: right;">Page 145</p> <p>1 Q Dr. Beeler, you described your two publications</p> <p>2 that you are part of, that what you did was edit</p> <p>3 the manuscript.</p> <p>4 A Right.</p> <p>5 MS. RICCHIUTO: Objection. Misstates the</p> <p>6 testimony.</p> <p>7 Q I can get law clerks to edit manuscripts.</p> <p>8 MS. RICCHIUTO: Objection. Argumentative.</p> <p>9 That's not a question, Jim.</p> <p>10 A I would have loved to write more papers on my own,</p> <p>11 but I was taking care of sick patients every day, I</p> <p>12 was making policy, I was reviewing literature as</p> <p>13 opposed to having a lot of free time to sit down as</p> <p>14 a cardiologist and put together papers.</p> <p>15 Q You think his paper is not based upon his treating</p> <p>16 of COVID patients?</p> <p>17 A I think that the primary individuals responsible</p> <p>18 for the treatment and approach to COVID in the</p> <p>19 hospitals are the hospital epidemiologists and the</p> <p>20 infectious disease physicians.</p> <p>21 Q You don't even know what he was doing, do you?</p> <p>22 MS. RICCHIUTO: Object.</p> <p>23 A I would be very surprised if they were consulting</p> <p>24 cardiology for care of COVID patients. ICU doctors</p> <p>25 and hospitalists were the main workforce related to</p>	<p style="text-align: right;">Page 146</p> <p>1 COVID. Infectious disease was consulted on almost</p> <p>2 all of those. So I can't speak to what he was</p> <p>3 doing, but I know the realm of expertise of</p> <p>4 infectious disease physicians versus cardiologists.</p> <p>5 If I were -- if I were being asked --</p> <p>6 certainly COVID is new. Anyone could catch up on</p> <p>7 COVID literature. But if I was asked for the -- if</p> <p>8 I was asking for an opinion and -- if I were being</p> <p>9 asked to train up on echocardiography; right?</p> <p>10 Yeah, I could probably learn echocardiography,</p> <p>11 sonograms of the heart, but would you really want</p> <p>12 me doing that when I don't know the same amount of</p> <p>13 physiology as a cardiologist? I would want someone</p> <p>14 that has the background in those areas. Infectious</p> <p>15 disease has the background in those areas where</p> <p>16 cardiology does not.</p> <p>17 MR. BOPP: I don't have any more questions.</p> <p>18 Thank you.</p> <p>19 Do you?</p> <p>20 MS. RICCHIUTO: I do.</p> <p>21 MR. BOPP: Good. Good. We still have time.</p> <p>22 We were shooting for six.</p> <p>23 MS. RICCHIUTO: I know. I knew you could do</p> <p>24 it, Jim.</p> <p>25</p>
<p style="text-align: right;">Page 147</p> <p>1 EXAMINATION</p> <p>2 BY MS. RICCHIUTO:</p> <p>3 Q I'm going to try to be brief, Dr. Beeler. We</p> <p>4 really appreciate you being here today.</p> <p>5 Really quickly, I want to take you back to</p> <p>6 Exhibit 2 that Mr. Bopp showed you. This is that</p> <p>7 CareDash Internet page.</p> <p>8 A Let me find that. Yes.</p> <p>9 Q Do you have any idea, like do you know anything</p> <p>10 about CareDash? Is this an authoritative document</p> <p>11 or source?</p> <p>12 A I have never honestly heard about this, but when</p> <p>13 you Google yourself, there's a bunch of these</p> <p>14 websites that come up that have generic</p> <p>15 explanations related to your profession that</p> <p>16 usually is inaccurate.</p> <p>17 Q So the bio that Mr. Bopp referred to on the</p> <p>18 CareDash site, that's not a bio that you wrote or</p> <p>19 contributed to; correct?</p> <p>20 A Or -- correct, or anyone that I've worked with.</p> <p>21 That makes no sense as a bio for an infectious</p> <p>22 disease physician.</p> <p>23 Q Mr. Bopp also showed you Exhibit 3, which was a</p> <p>24 U.S. News summary. Is that the thing that you</p> <p>25 specifically drafted as an exhaustive description</p>	<p style="text-align: right;">Page 148</p> <p>1 of your credentials?</p> <p>2 A Absolutely not. And I don't know any -- any person</p> <p>3 that would have contributed to this. This looks</p> <p>4 like they just pulled data from some sort of area</p> <p>5 and plugged it into a template.</p> <p>6 Q So if someone were interested in your credentials</p> <p>7 with respect to COVID or anything else, is this</p> <p>8 where you would direct them, Dr. Beeler?</p> <p>9 A Absolutely not.</p> <p>10 Q Okay. Describe for me your credentials</p> <p>11 specifically with respect to COVID.</p> <p>12 A So I am the medical director of infection</p> <p>13 prevention for Indiana University Hospital.</p> <p>14 Functionally that means I'm responsible for the</p> <p>15 protection of the healthcare workers and each</p> <p>16 individual patient that comes in, specifically as</p> <p>17 it relates to COVID.</p> <p>18 From the beginning of the pandemic, we were</p> <p>19 the main focal point for developing policy,</p> <p>20 responding to numbers, developing infrastructure in</p> <p>21 the hospital, and working with the multiple</p> <p>22 different teams in the hospital in order to build a</p> <p>23 response. That is part of it.</p> <p>24 The other part is as it relates to the medical</p> <p>25 response team through IU. That is all that</p>

<p style="text-align: right;">Page 149</p> <p>1 students, faculty and staff that develop COVID are</p> <p>2 individually reviewed by our team, we developed the</p> <p>3 policy with the IU Restart Committee, and then</p> <p>4 implemented the policy as it was accepted after the</p> <p>5 leadership.</p> <p>6 Q Okay. Mr. Bopp expressed some concern about the</p> <p>7 way that you had described your credentials, if you</p> <p>8 will, in your declaration. Is there anything else</p> <p>9 experientially that you would add to, you know,</p> <p>10 help the judge understand why you are a person that</p> <p>11 has credible relevant information on this subject?</p> <p>12 A You know, there's not separate training in</p> <p>13 coronavirus that is available. Everyone has been</p> <p>14 building off of previous knowledge in order to gain</p> <p>15 acumen in this area. I think that the other -- the</p> <p>16 only things that I listed in there that are</p> <p>17 applicable to this are the infectious disease board</p> <p>18 certification.</p> <p>19 Q And what's that process entail?</p> <p>20 A Infectious disease board certification requires</p> <p>21 three years of internal medicine residency with</p> <p>22 board certification in internal medicine. It then</p> <p>23 requires -- I did two -- I did, actually, four</p> <p>24 years of internal medicine residency with an extra</p> <p>25 chief residency year at Eskenazi Hospital. Then</p>	<p style="text-align: right;">Page 150</p> <p>1 went on to do an infectious disease fellowship for</p> <p>2 two years, which included research, and then became</p> <p>3 a practicing infectious disease physician.</p> <p>4 Q And you maintain that practice today; correct?</p> <p>5 A I maintain that, yes.</p> <p>6 Q I just want to ask you about a couple, a few other</p> <p>7 things that you said during your testimony. At one</p> <p>8 point you referred to I think a scenario where you</p> <p>9 were analyzing what could be possible with a static</p> <p>10 pathogen. Those are words that I wrote down that</p> <p>11 you said.</p> <p>12 Can you explain what a static pathogen is --</p> <p>13 I'm going to ask you a compound question and tell</p> <p>14 you that it's one. What a static pathogen is and</p> <p>15 whether COVID is considered a static pathogen.</p> <p>16 A So I think the context behind that discussion was</p> <p>17 related to questions about herd immunity thresholds</p> <p>18 and trying to understand if we're at herd immunity,</p> <p>19 if we were at herd immunity.</p> <p>20 And the problem with herd immunity</p> <p>21 calculations is that it implies that the immunity</p> <p>22 that you develop yesterday will still be good three</p> <p>23 months from now. Immunity is very much based on</p> <p>24 whether or not the virus maintains its same shape,</p> <p>25 its same structures that our immune system</p>
<p style="text-align: right;">Page 151</p> <p>1 understands, recognizes, and is able to mount a</p> <p>2 memory against.</p> <p>3 If viruses are changing, or any pathogen is</p> <p>4 changing what it looks like, how the immune system</p> <p>5 interacts with it, then that could potentially</p> <p>6 develop evasion of the immune system and therefore</p> <p>7 a change in how the previous immunity is going to</p> <p>8 relate to the new version of the virus.</p> <p>9 So in the context of COVID, the reason that's</p> <p>10 pertinent is because COVID continues to mutate,</p> <p>11 it's mutating relatively rapidly, and it's mutating</p> <p>12 in areas that are of high consequence. And those</p> <p>13 areas are particularly in the areas that our immune</p> <p>14 system likes to target for the immune response,</p> <p>15 likes to use in order to get protection, which is</p> <p>16 receptive binding domain of the virus, as well as</p> <p>17 the spike domain of the virus.</p> <p>18 If those weren't mutating at all, I would</p> <p>19 consider that a static virus, and I would trust</p> <p>20 your immunity three years ago to your immunity</p> <p>21 today. That's like measles, mumps, rubella. We</p> <p>22 get vaccines in childhood. Those viruses aren't</p> <p>23 mutating, they're not changing, and because of that</p> <p>24 your immunity yesterday is as good as your immunity</p> <p>25 today, assuming nothing else changes as it relates</p>	<p style="text-align: right;">Page 152</p> <p>1 to immunosuppression.</p> <p>2 So the reason that COVID is different from</p> <p>3 measles and mumps and rubella, things like that, is</p> <p>4 because it does not mutate at the same rates and in</p> <p>5 as consequential areas as coronavirus is mutating.</p> <p>6 The areas of change in coronavirus are in</p> <p>7 areas that are of high consequence to the immune</p> <p>8 system -- or the ones that come to public attention</p> <p>9 are called variants of high consequence, or</p> <p>10 variants of concern, are areas where we have</p> <p>11 mutations in places that could potentially lead to</p> <p>12 either failure of the immune response to be durable</p> <p>13 or failure of any of our individual therapies to</p> <p>14 target coronavirus.</p> <p>15 Q I am clearly not an infectious disease specialist</p> <p>16 but I have been reading and seeing things about the</p> <p>17 delta variant, Dr. Beeler. Are you familiar with</p> <p>18 that?</p> <p>19 A I am.</p> <p>20 Q Is that a variant of concern?</p> <p>21 A Yes, it's been labeled as a variant of concern from</p> <p>22 the CDC. I think it definitely is concerning for a</p> <p>23 number of reasons.</p> <p>24 One, the mutations in the spike domain seem to</p> <p>25 imply, just based on their locations, that the</p>

<p style="text-align: right;">Page 153</p> <p>1 vaccines might not be as effective. And actually</p> <p>2 we're seeing that play out. There was actually</p> <p>3 just a release I think yesterday about how Israel,</p> <p>4 due to the fact that they've switched over to delta</p> <p>5 variant, is seeing a higher number of COVID</p> <p>6 infections despite having a very large percentage</p> <p>7 that has been vaccinated.</p> <p>8 So I think that the jury is still out on the</p> <p>9 consequences of some of these variants. We do know</p> <p>10 that vaccines still work; it just might be to a</p> <p>11 lesser degree on this. We don't have good data on</p> <p>12 what this means for natural immunity. And it's a</p> <p>13 very real possibility given the narrower breadth of</p> <p>14 antibody response to natural immunity that if</p> <p>15 there's not a variant now, there could be a variant</p> <p>16 in the future that will allow repeat infections and</p> <p>17 more morbidity to develop.</p> <p>18 The only way to effectively eliminate variant</p> <p>19 selection, or creation of more mutations, is to</p> <p>20 squelch the virus, to get to herd immunity, to get</p> <p>21 to zero infections, because each new person that</p> <p>22 the virus infects, it's an opportunity to mutate.</p> <p>23 And evolutionary principles, life finds a way, that</p> <p>24 the virus will find ways to get around our</p> <p>25 stressors if it's not completely eliminated.</p>	<p style="text-align: right;">Page 154</p> <p>1 So from a public health perspective, since</p> <p>2 there's so much uncertainty in the future, the</p> <p>3 safest thing, given all the damage that it's</p> <p>4 created so far to America and the world, is to get</p> <p>5 things to zero as fast as we possibly can. It's a</p> <p>6 race between our global immunity, our herd</p> <p>7 immunity, and the ability of the virus to mutate.</p> <p>8 Q One of the things that you were asked about, and I</p> <p>9 think you said this a couple of times, this idea</p> <p>10 that more boosters is better. Do you remember that</p> <p>11 testimony?</p> <p>12 A Yeah.</p> <p>13 Q I want to make sure that there's not any</p> <p>14 misunderstanding. Is it -- is it good or helpful</p> <p>15 for individuals to be infected with COVID just</p> <p>16 generally? Is that a good thing to have happen to</p> <p>17 you?</p> <p>18 A It's a bad thing to have happen to you. I would</p> <p>19 say that the difference between bads between</p> <p>20 different groups varies, as we discussed. But, in</p> <p>21 general, it's much safer to become immune to the</p> <p>22 virus through vaccination than through natural</p> <p>23 infection because there's a lot of consequences to</p> <p>24 natural infection that we know, and there's even</p> <p>25 more that we probably don't know.</p>
<p style="text-align: right;">Page 155</p> <p>1 And I would have a much higher suspicion just</p> <p>2 based on previous analogies to other viruses of</p> <p>3 long-term complications from a chronic viral</p> <p>4 infection, or a resetting of the viral infection to</p> <p>5 the homeostasis of the body than I would for a</p> <p>6 vaccine.</p> <p>7 (Discussion held off the record.)</p> <p>8 I would have much higher concerns for</p> <p>9 long-term complications of a viral infection, a</p> <p>10 chronic viral infection, than I would for long-term</p> <p>11 complications of a vaccine based on historical</p> <p>12 precedent with other viruses.</p> <p>13 Q You gave some testimony about contraindications to</p> <p>14 receiving the COVID vaccine. Do you remember that</p> <p>15 testimony?</p> <p>16 A Yeah.</p> <p>17 Q And I think you said at one point -- I think you</p> <p>18 and Mr. Bopp may not have been exactly on the same</p> <p>19 page, and at one point you said you think there may</p> <p>20 be a semantic issue, and I want to try to clear</p> <p>21 that up if I can.</p> <p>22 Is there a difference between a</p> <p>23 contraindication that's been specifically</p> <p>24 identified and, for example, another clinical</p> <p>25 reason to delay the vaccine? Are those the same</p>	<p style="text-align: right;">Page 156</p> <p>1 concepts?</p> <p>2 A That's good. And I apologize that I didn't clarify</p> <p>3 that earlier. We call them two separate things.</p> <p>4 We call them exemptions, meaning that you never</p> <p>5 have to get the COVID vaccine because it's never</p> <p>6 going to be a good idea for you because you have</p> <p>7 some sort of threatening relationship to the</p> <p>8 vaccine, and that's usually going to be allergy.</p> <p>9 That's almost always going to be allergy.</p> <p>10 The only -- and so the other group is what we</p> <p>11 call deferrals. And like you mentioned, those are</p> <p>12 patients who could get the vaccine, they don't have</p> <p>13 a strict contraindication, like the vaccine's not</p> <p>14 going to hurt them, but there's probably maybe a</p> <p>15 more opportune time to consider it.</p> <p>16 And the way we handle that behind the scenes</p> <p>17 is that we set a date to reapproach the individual</p> <p>18 and say, "Hey, you've told us that this date was</p> <p>19 going to be a good time for you to get the vaccine.</p> <p>20 Is it still a good time for you to get the vaccine?</p> <p>21 Can we help you get vaccinated?"</p> <p>22 Q And let's drill down that a little bit more,</p> <p>23 because that doesn't -- you're not, in that</p> <p>24 example, Dr. Beeler, I take it you're not talking</p> <p>25 about like somebody's schedule when they're</p>

<p style="text-align: right;">Page 157</p> <p>1 available to get the vaccine.</p> <p>2 A No, this would be based on maybe a therapeutic</p> <p>3 schedule. So, for instance, if they were getting</p> <p>4 high dose steroids right now or chemotherapy</p> <p>5 related to a cancer, we would probably set that</p> <p>6 date with their physician out for when they were</p> <p>7 done with their chemotherapy and their immune</p> <p>8 system is reconstituted.</p> <p>9 So that's the most common scenario that we're</p> <p>10 getting, but there are going to be some people that</p> <p>11 become functionally adept, exempt, because they've</p> <p>12 got a chronic condition that always needs</p> <p>13 immunosuppression and they can never come off it.</p> <p>14 And even though we set an end date, it's just a</p> <p>15 time to revisit to see if anything has changed and</p> <p>16 if they might be now safer to get the vaccine or</p> <p>17 might be more likely to develop a healthy immune</p> <p>18 response to the vaccine.</p> <p>19 Q So in your example, just to hopefully button up the</p> <p>20 terminology, in your example, someone who has a</p> <p>21 medical deferral basis because they're currently in</p> <p>22 chemotherapy, for example, does that make</p> <p>23 chemotherapy a contraindication for the vaccine?</p> <p>24 A No.</p> <p>25 Q One other place where you and Mr. Bopp maybe had</p>	<p style="text-align: right;">Page 158</p> <p>1 just a smidge trouble understanding each other was</p> <p>2 this idea about who can and can't mount an immune</p> <p>3 response. And my perception, just sitting in the</p> <p>4 room, was that perhaps Mr. Bopp's view was that</p> <p>5 there are people who are a yes or a no, you know.</p> <p>6 I can mount an immune response but Dr. Beeler</p> <p>7 can't.</p> <p>8 I thought I understood your testimony to</p> <p>9 suggest that it might be more nuanced than that in</p> <p>10 terms of there are yes people over here and there</p> <p>11 are no people over here.</p> <p>12 So that's a long lead-up to say can you say</p> <p>13 more about, and try to clarify the record on this</p> <p>14 concept of whom could or could not mount an immune</p> <p>15 response, and are those fixed categories where a</p> <p>16 person is labeled yes or no, or is it something</p> <p>17 else?</p> <p>18 A Yeah, I think it is a lot of gray area. And the</p> <p>19 only other thing that I would mention is that it's</p> <p>20 not binary. There's going to be a gradient. So,</p> <p>21 for instance, you know, the 60-year-old that mounts</p> <p>22 some antibody might have some protection. Maybe</p> <p>23 it's enough protection to fend off, I don't know, a</p> <p>24 certain amount of viral load. But that doesn't</p> <p>25 necessarily, if they get a higher viral load, means</p>
<p style="text-align: right;">Page 159</p> <p>1 that they would be as protected.</p> <p>2 And that's going to be different for each</p> <p>3 individual based on the complex interplay between</p> <p>4 their comorbidities, their immune system, the other</p> <p>5 stuff they've got going on in their life.</p> <p>6 Stressors can even decrease the immune response to</p> <p>7 vaccines.</p> <p>8 So there's so many things that go into the</p> <p>9 gradients behind a healthy response versus a</p> <p>10 nonhealthy response, that change over time as well,</p> <p>11 that it's really hard to bucket people and give an</p> <p>12 exact number of what percentage are absolutely</p> <p>13 vulnerable at any given time.</p> <p>14 I would say that, in general, that percentage</p> <p>15 is going to change over time. And that could</p> <p>16 change on a daily basis for some people depending</p> <p>17 on what else is going on in their lives, which is</p> <p>18 why I think vaccination is still worth it for those</p> <p>19 people, but also they need a little bit of extra</p> <p>20 help from people around them to make sure that</p> <p>21 they're also protected so they don't get infected</p> <p>22 while they're vulnerable.</p> <p>23 Q So is it accurate, Dr. Beeler, do I understand you</p> <p>24 to be saying people could mount a different level</p> <p>25 of immune response, even a single individual could</p>	<p style="text-align: right;">Page 160</p> <p>1 mount a different level of immune response over</p> <p>2 time?</p> <p>3 A Yeah. Immunity wanes over time, and it depends on</p> <p>4 what else is going on in their lives at the same</p> <p>5 time. So it's very possible that even a healthy</p> <p>6 person might not mount appropriate immune response</p> <p>7 based on other things that might be going on at the</p> <p>8 time.</p> <p>9 Q Okay. I think this is my last question.</p> <p>10 You talked to Mr. Bopp about the exemption</p> <p>11 criteria, and the communication that your team has</p> <p>12 with physicians when they have submitted an</p> <p>13 exemption request on behalf of a student. Do you</p> <p>14 remember that testimony?</p> <p>15 A Yeah.</p> <p>16 Q And I want to make sure that the record is clear</p> <p>17 about this. Who decides whether an Indiana</p> <p>18 University student gets vaccinated?</p> <p>19 A Whether an Indiana University students gets</p> <p>20 vaccinated?</p> <p>21 Q Yes.</p> <p>22 A The Indiana University student decides on the</p> <p>23 vaccine. Even though there's a mandate, it's just</p> <p>24 policy. So they do have options for other schools</p> <p>25 that they could go to, even though I would hate to</p>

Page 161

1 lose a constituent. And they have the option to
2 exempt. But, ultimately, they have to be the one
3 to choose to adhere to that policy or not.
4 Q And there's no circumstances, are there,
5 Dr. Beeler, where I think Mr. Bopp suggested that
6 IU was overriding the doctor, for example, and
7 requiring a student to get vaccinated. That does
8 not happen, does it?
9 A We work very closely with the physician, again, to
10 tailor the response to what the -- what's best for
11 the patient. And the reason I keep responding that
12 way is it's -- the most frequent scenario is we
13 reach out to the physician, we say, "Hey, this
14 actually isn't a contraindication."
15 They're, like, "Okay." Like, "I didn't know
16 that. I thought that it would be -- I thought it
17 would be one."
18 So, you know, I think there's still a lot of
19 misconceptions even in the medical community about
20 vaccination and about the COVID vaccine, because it
21 is new and it's hard to keep up on all the stuff
22 that's changing. But we do try to work with them
23 and do try and provide whatever evidence they need
24 in order to try to make the decision.
25 But very frequently we will, if they have

Page 163

1 get a vaccination and have not received an
2 exemption, their only choice is to leave the
3 university because they are not allowed to go to
4 class or do anything.
5 A There are pathways for which they can discuss with
6 the medical response team, have their physician
7 advocate for them.
8 Q They've done all the discussion and you've said get
9 a vaccination and they say no, I'm not going to do
10 it. They will be virtually expelled by -- they
11 can't go to class and everything else; correct?
12 A Yes. Those are the repercussions of the policy.
13 Q Yes. So love it or leave it; right?
14 MS. RICCHIUTO: Object to form.
15 A I don't know what that means.
16 Q You don't?
17 A Love it or leave it?
18 MR. BOPP: Okay. No more questions. Thank
19 you.
20 MS. RICCHIUTO: Okay.
21 (Deposition concluded at 5:08 p.m.)
22
23
24
25

Page 162

1 strong opinions on it regardless of what we say,
2 we'll adhere to their recommendations.
3 Q Correct. So there's no circumstance where Indiana
4 University makes the decision that a student will
5 get vaccinated.
6 A Correct.
7 MS. RICCHIUTO: That's all the questions I
8 have.
9 EXAMINATION
10 BY MR. BOPP:
11 Q Well, you make a decision that they will get
12 vaccinated or they have to leave.
13 A We have a policy that says that they need to have
14 proof of vaccination or exemption.
15 Q So that's a yes to my question. If they're not
16 willing to comply with the policy, then they have
17 to leave Indiana University.
18 A They have to adhere to all Indiana University
19 policies. It includes that.
20 Q Why don't you just answer my question, for heavens
21 sake.
22 MS. RICCHIUTO: Objection. Argumentative.
23 Q I mean, it's such a simple question.
24 MS. RICCHIUTO: You've gotten an answer to it.
25 Q If they don't comply with the requirement that they

Page 164

1 UNITED STATES DISTRICT COURT
2 NORTHERN DISTRICT OF INDIANA
3 RYAN KLAASSEN, JAIME CARINI,)
4 D.J.B. by and through his)
5 next friend and father,)
6 Daniel G. Baumgartner, ASHLEE)
7 MORRIS, SETH CROWDER, MACEY)
8 POLICKA, MARGARET ROTH, and)
9 NATALIE SPERAZZA,)
10)
11 Plaintiffs,)
12)
13 -v-) CASE NO.
14) 1:21-cv-238-DRL-SLC
15 THE TRUSTEES OF INDIANA)
16 UNIVERSITY,)
17)
18 Defendant.)
19)
20 Job No. 163715
21
22 I, COLE BEELER, M.D., state that I have read
23 the foregoing transcript of the testimony given by me
24 at my deposition on July 7, 2021, and that said
25 transcript constitutes a true and correct record of
the testimony given by me at said deposition except as
I have so indicated on the errata sheets provided
herein.

COLE BEELER, M.D.

STEWART RICHARDSON & ASSOCIATES
Registered Professional Reporters
One Indiana Square, Suite 2425
Indianapolis, IN 46204
(800)869-0873

<p style="text-align: right;">Page 165</p> <p>1 STATE OF INDIANA 2 COUNTY OF MARION 3 4 I, Patrice E. Morrison, a Notary Public in and 5 for said county and state, do hereby certify that the 6 deponent herein was by me first duly sworn to tell the 7 truth, the whole truth, and nothing but the truth in 8 the aforementioned matter; 9 That the foregoing deposition was taken on 10 behalf of the Plaintiffs; that said deposition was 11 taken at the time and place heretofore mentioned 12 between 1:02 p.m. and 5:08 p.m.; 13 That said deposition was taken down in 14 stenograph notes and afterwards reduced to typewriting 15 under my direction; and that the typewritten 16 transcript is a true record of the testimony given by 17 said deponent; 18 And thereafter presented to said witness for 19 signature; that this certificate does not purport to 20 acknowledge or verify the signature hereto of the 21 deponent. 22 I do further certify that I am a disinterested 23 person in this cause of action; that I am not a 24 relative of the attorneys for any of the parties. 25</p>	<p style="text-align: right;">Page 166</p> <p>1 IN WITNESS WHEREOF, I have hereunto set my 2 hand and affixed my notarial seal this 9th day of 3 July, 2021. 4 5 6 7 8 9 10 11 <hr/>Patrice E. Morrison, Notary Public 12 13 My commission expires: September 28, 2025 14 15 Job No. 163715 16 17 18 19 20 21 22 23 24 25</p>